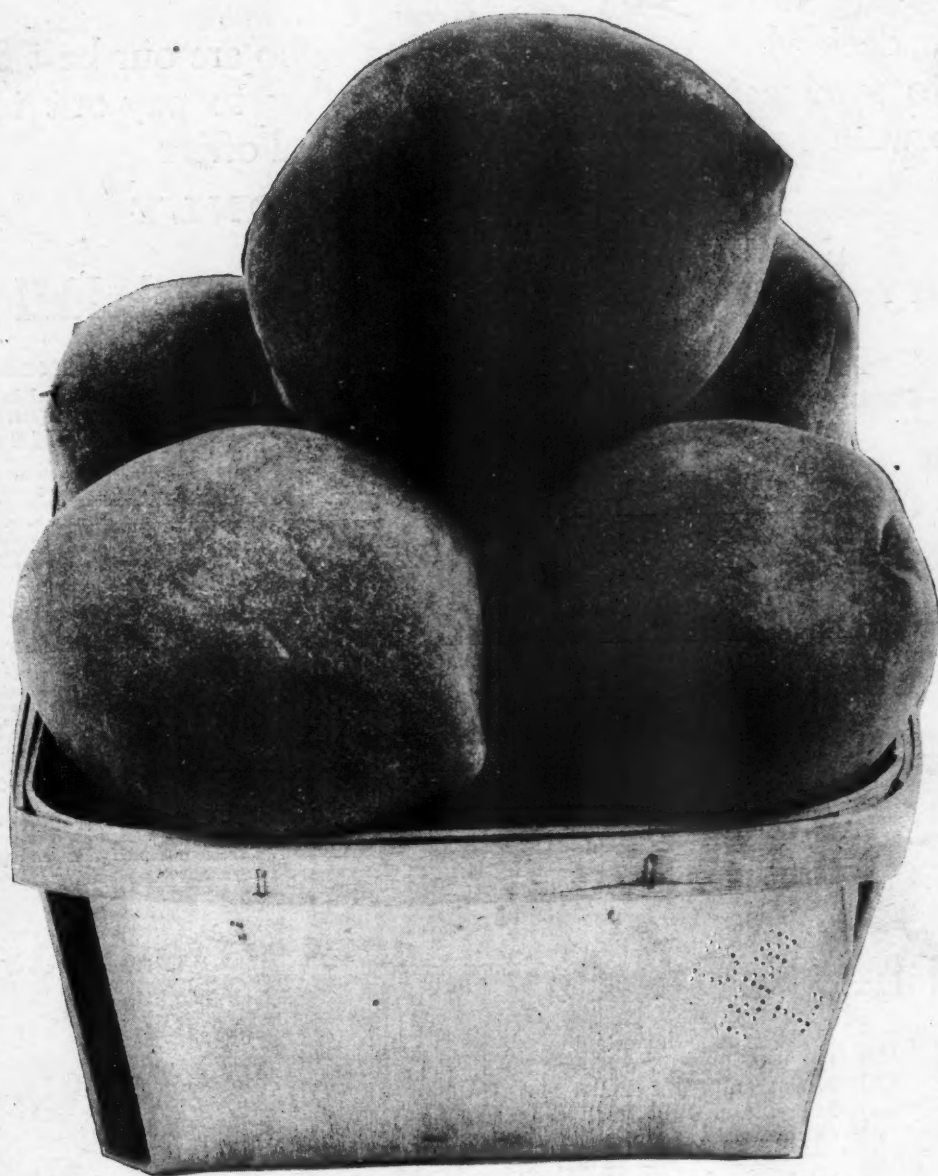


GREEN'S FRUIT GROWER



A MAGAZINE
WITH A MISSION

JANUARY, 1914

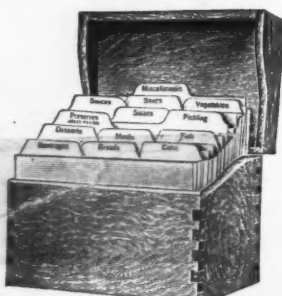
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By HARRIET A. BLACK

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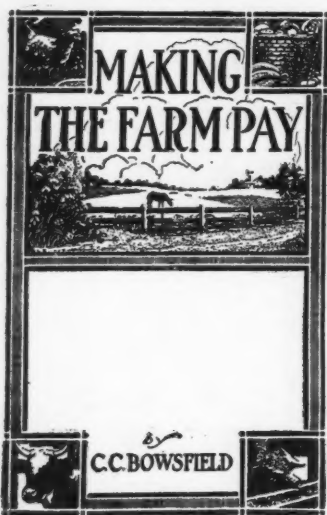
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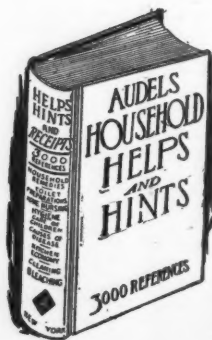
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There is an increasing demand for America's greatest fruit paper. In order to meet this demand in every community, we are making these liberal offers to our subscribers who know about the paper and can best tell others about it. You will find it easy to get subscribers.

Green's Fruit Grower, Rochester, N. Y.

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CLEAN Rugs, matting, furniture, bathrooms, bedrooms, lamps, stoves, metals, glassware, linoleum and oil cloth, silks, velvets, laces, gloves, furs, shoes, paintings, books, leather, celluloid, ivory, lacquers, varnishes, stove linings, carpets, wall paper, etc.

CARE FOR the human body, diet, children, refrigerators and cellars, clothing, paintings, furniture, birds, the kitchen, the laundry, carpets, utensils, gold, zinc, glass, fires, furnaces, waste-pipes, musical instruments, man's wardrobe, mattresses, etc.

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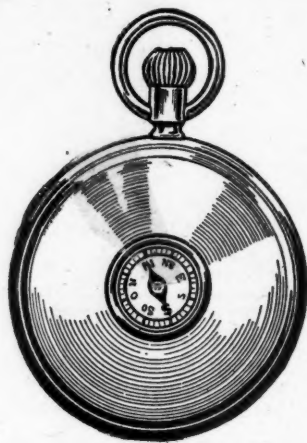
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The dependable companion for man or boy. Has a clear-cut, truthful face, strong, reliable works, snappy intelligent compass back.

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GREEN'S FRUIT GROWER

A Monthly Magazine for the Fruit Growing Farmer and His Family

CHARLES A. GREEN, Editor

Volume 34

ROCHESTER, N. Y., JANUARY, 1914

Number 1

January.

"Janus and I; oldest of potatoes!
Forward I look and backward, and below
I count—as god of avenues and gates—
The years that through my portals come and go.
I block the roads and drift the fields with snow."
—Longfellow.

Will It Pay to Grow for Market Apples of High Quality?

By Chas. A. Green.

This is a subject that I have been deeply interested in. I am a grower of superior flavored apples which I enjoy eating. I have desired to learn whether there were enough people who were willing and able to buy these superior apples at a price that would warrant the growing of apples of superior quality. To this end I have packed these high quality apples in boxes of standard size and offered them for sale at \$2.00 per box. I have advertised them to a moderate extent and have made moderate sales, but am not entirely satisfied that at the present day there are enough people in the country to appreciate high quality apples to warrant their being planted extensively for market, yet I am planting such an orchard myself. I find in the city of Rochester, N. Y., moderately rich men who buy every year of the same farmer a few barrels of Spy, King, Jonathan and other well known apples of good quality, paying \$6.00 per barrel without regard to the ordinary price for the ordinary varieties which are often sold at from \$1.50 per barrel to \$3.00 per barrel at the same time they are paying \$6.00 per barrel for apples of better quality and more carefully graded. These men do not complain of the price they pay. What they want is good eating apples carefully sorted and packed.

I have learned from my experience, which has extended through several years, that anyone growing high quality apples for market, must build up his business along that line just as any other business must be built up. The first few years he cannot expect a large demand from consumers because the individual or company is just starting and has not earned a reputation, but each year, after careful sorting and packing, he will find his business increasing. Ultimately he will have a big demand for his superior fruit. This condition of things will increase year by year rapidly as the people become better informed in regard to the value of different varieties and realize that certain varieties are worth more than twice as much as others when you come to consider the extra fine flavor and delicate flesh of the superior varieties. At present the great mass of the apple eating people know nothing about many other varieties than Baldwin, Greening, Spy, King and other old varieties. They have never seen a Banana, Mother, Melon, Spitzenburg, Blenheim Orange, Shawssee Beauty, McIntosh or Fameuse, therefore these newer and better varieties are to them an unknown quantity. It is pretty much the same way with other fruits. The people who buy peaches, grapes, plums and cherries, do not know one variety from another, and are not able to select from the market where they buy, the best varieties.

Planning for Next Season's Operations

Written for Green's Fruit Grower by J. S. Underwood, Illinois.

Winter is the time to carefully plan the work to be done next season. There will be much time which can be profitably and, indeed, pleasantly spent in making plans for the season of 1914, and thinking over the problems which the past year's experience has brought home to us for solution.

I heard a successful vegetable and small fruit grower remark the other day that it requires a good deal of thinking to suc-

cessfully conduct even a few acres. This is true, but I am personally acquainted with several who do not appear to recognize it, and simply follow the beaten path to which they have been accustomed from year to year, without expending any considerable amount of thought as to whether their regular routine could not be improved upon and their operations made more profitable by a little timely thought and study. Examples are not uncommon in almost any section to prove that such would be the case, but the habits of several years are hard to break.

I think one trouble with most of us is that there is not enough faith put into our work to make the necessary investment to reach the highest success, whether that investment be in the capital or the effort that is put into the business.

Sometimes we may not have been satisfied with the results which we have gotten, yet feel that our failure was due to unfavorable conditions, or to some freak of nature, rather than to ourselves, and consequently do not spend the time necessary in thinking and planning how we could bring entire success instead of partial failure under like conditions in another season.

To the man of an investigating turn of

duction, even where the product itself is doubled or perhaps largely increased.

There are many problems of this kind which this will suggest to any one who plans this winter for next season's operations, and if a solution of them involves some improvements about the farm which will require additional investment, or take more planning to carry into effect, the habit of carefully planning for the work ahead and of carefully thinking out the details and studying the means by which the work can be brought to a most successful consummation, when it once becomes fixed, will greatly increase his knowledge and the enjoyment of his work, thus making him not only better, but a more successful producer of marketable products.

Report of Expenses and Profits of a 1913 Peach Crop On Less Than 100 Acres.

Editor of Green's Fruit Grower:—The shipments were as follows: 20,214 half-bushel baskets, or 31 cars of 640 baskets each and 374 baskets over; 12,089 carriers, six gallon, making 30 cars of 400 carriers each with 89 carriers over. This makes a total of nearly 62 cars, or 19,174 bushels,



Culled apples waiting for the evaporator.

writes Mr. Harrison.

The highest price for which first grade peaches in six gallon carriers sold for, net f. o. b. Berlin, was \$2.00; the lowest price \$1.25. The highest price paid for one-half bushel baskets, first grade peaches, net f. o. b. Berlin, was \$1.05 per basket; lowest price, 60 cents.

The total net sales of peaches was \$35,165.53, which would make an average price per bushel, including all grades, soft peaches sold locally, etc., of \$1.83.

The first full car was loaded on July 18th; the last full car was loaded on August 22nd.

The expense we had in growing this crop of peaches, picking, packing it and loading on cars was as follows:

Plowing, cultivating.....	\$ 776.37
Pruning, etc.....	395.71
Fertilizing, seeding.....	60.50
Spraying.....	704.72
Harvesting, hauling, loading.....	2286.06

Total labor account.....\$4223.36

On nine cars which we consigned on our own account we had to pay,

Ice charges.....	\$ 242.50
Spent for carriers.....	2058.73
For baskets.....	1085.90
Labels.....	38.25
Pads.....	149.00
Spray material.....	1528.95

Making a total.....\$5103.33
Added to labor.....4223.36

Total expense.....\$9326.69
which amount deducted from the total net sales of \$35,165.53, leaves a total net profit for the year on the peach crop of \$25,838.84. Can you beat it?

Getting Rid of Waste Lands.

Written for Green's Fruit Grower by John W. Richardson.

Like many New England farms, the one which came into my possession was divided into small fields by stone walls. The frosts of many winters had brought them into a twisted and tumbledown condition, and years of careless cultivation had permitted the growth of bushes and briars along their sides. Two things were apparent. The fields were too small for convenient or economical cultivation, and each of these old fences made a strip of ground at least eight feet wide practically waste land. Resolving to remedy this condition, with the labor of hired man and team when other farm work was not pressing, most of these useless fences were removed to the outside boundary walls of the farm. With this additional material these outside walls were rebuilt in a substantial manner.

The result was eminently satisfactory. At comparatively small expense an acre or two of virgin soil hitherto worse than useless, was made available for cultivation. Also the larger fields were more easily and profitably worked, and an addition made to the value and beauty of the farm.

My attention was next turned to an unsightly acre of neglected ground lying between two cultivated fields. The oldest inhabitant said it had never been plowed. It certainly had a most forbidding look, and probably no previous owner had sufficient courage to attempt to reclaim it. On its surface several large boulders and numerous smaller ones were partly concealed by a growth of hardhack, wild rose and huckleberry bushes. It was indeed waste land.

A neighbor when told that I intended to clear it up and plow it, said,—"You will find that you have tackled a bigger job than you are aware of." "All right," I replied, "I shall try it anyway." On cloudy days in haying time the bushes were closely cut with a stout scythe and as soon as dry burned on the ground.

The larger boulders were blasted into pieces of convenient size to be hauled away, the smaller ones pried out with crowbars, and all removed to a place where I wished to build a new wall. In the fall with a strong team a much better job of plowing was done than I had thought possible, and the furrows were left to be disintegrated by the winter frosts. The next year the ground was thoroughly disked four times, the bush roots piled and burned, and the ashes spread. The following spring a good dressing of well-rotted barnyard manure was harrowed in with the disk harrow. About June 1st winter squashes were planted eight feet apart each way, with two shovelfuls of fine manure mixed with the soil in each hill. Until the growth of the vines prevented, the soil between the rows was kept well stirred with a cultivator. In October eight tons of squashes were harvested and sold to a nearby canning factory. As the squash crop generally was a failure that year, I received the unusually high price of forty dollars per ton. As soon as the squashes were off, the ground was seeded with timothy and clover, which yielded two good crops the next season. The squashes alone more than paid all the expense of converting what had been only an eyesore, into a productive field.

The writer hopes this record of his experience may encourage other farmers to get rid of their "waste land."

"Poor man! How he shivers! He must be nearly frozen to death." "No, he isn't. I was just talking to him. He says something is wrong with his watch and he has to keep jiggling it to keep it from stopping."—"Judge."

A Practical Fruit Garden

Written for Green's Fruit Grower by F. H. Sweet, Va.

Whatever may be the dimensions of the area which the home-maker is able to use for a fruit garden—and it should be liberal—there are some practical points that he should consider carefully before planting.

Before setting a tree, make a plan of the garden drawn to a scale. Figure out on paper how you can dispose of the various fruits so as to secure the greatest economy of space. Many fruit gardens are planted in a careless, haphazard sort of way, and therefore have no definite and logical arrangement. If you have only a quarter acre to spare, or even less, it pays to make a plan. You can see things on paper that you cannot see in the field. Having made a good plan, preserve it, and follow it consistently in all your planting.

No matter where you are located, there is probably a great variety of fruits which you can grow. But the point is, which will grow best? The average home orchardist cannot afford to fool away his time in oddities. Examine the successful home orchards of your neighbors, and seek the advice of the owners. Make the main body of your planting of standard fruits, and then if you have room tuck in a few of the others for trial. Remember, also, that if your space is limited it may be better for you not to try to grow the staple fruits, as winter apples and winter pears, but give all your space to the early and tender sorts, such as small fruits, peaches, pears, and early apples; just as you would not try to grow the winter supply of potatoes in a small garden which can be used to better advantage in growing beets, radishes, tomatoes, and such things.

Most fruits will thrive on a great many varieties of soil, but every one is more or less partial to soils of a certain character. It is usually out of the question to do much in adapting the different fruits to the different soils in the home fruit garden, but this point should be kept in mind and advantage taken of any little variation of soil. In general, the home fruits (apples and pears) prefer a heavier soil than the stone fruits (plums, peaches, cherries and apricots). Apples seem to do especially well on a clay loam; pears on a heavy clay loam; plums and cherries on a medium loam; peaches and apricots on a light, sandy loam; quinces on a heavy, deep and moist loam; the bush fruits, as currants, raspberries, etc., on a medium heavy and moist loam; strawberries and grapes on rather light soil. Of all the fruits, the apple succeeds on a greater variety of soils than any other. In laying out the fruit garden, respect these varying tastes and satisfy them wherever possible, but do not be deterred from growing any of the common fruits because you do not have the most favorable soil conditions for them. Good fruit can be grown on almost any soil if it is not extremely sandy, rocky, or shallow. Then again, soils are very readily modified in texture and fertility by careful management. Usually, success depends more upon the man who cares for the trees than upon the soil in which they are grown.

Here is a subject of dispute among amateur fruit growers. Shall I plant my orchard on a northern or southern slope? That depends. Plant on the northern slope when lateness is desired; plant on a southern slope when earliness is desired. For example, if there is danger in your locality of the fruit being cut off by frost, particularly peaches and plums, which blossom early, a southern slope should not be chosen, since the trees will blossom several days earlier than on the northern slope and so be more liable to injury. Again, you would not plant late-keeping winter apples on a southern slope, but you might plant early varieties, as Early Harvest and Astrachan, on a southern slope because you wish them to ripen as early as possible. The northern slope is apt to be cooler and more moist than the southern slope, hence it is better adapted for small fruits, which love these conditions. If the home fruit-grower is fortunate enough to be able to choose between slopes, he will do well to consider whether he wishes earliness or lateness, and select accordingly. In a majority of cases a northern exposure is preferable.

If you have any choice in sites, choose a gentle slope in preference to level land. A slope generally gives good water drainage; fruit trees cannot thrive with wet feet. Notice how they die out in the low

places, which are also the wet places. Again, a slope gives the fruit garden good air drainage. Cold air is heavier than warm air and settles to the low places, which are therefore the frosty places. On the other hand, avoid very steep slopes which can be tilled only with difficulty and are likely to be wind-swept. A slope of four or five feet in a hundred is sufficient. Many home orchards are planted on a hillside so steep that they cannot be tilled or sprayed. Better have the trees there than to have none at all, but these are rarely satisfactory. The general point to be kept in mind is not to put the fruit garden on flat land or in a



pocket, but to select a gentle slope.

Double planting is the growing of more than one kind of fruit on the same land at the same time; as apples, with peaches between the rows, or currants with strawberries, etc. One objection to double planting is that different fruits require different treatment as regards tillage, pruning, etc., and it is an inconvenience in caring for them to have them mixed. Another and more serious objection to double planting, as usually practiced, is that the several fruits are crowded so that none have room to do their best. Usually the home fruit grower does not realize that, when he plants several kinds of fruit thickly upon his land, he is placing a heavy tax upon the land, and ought to fertilize very much heavier than he would for one crop only. Double planting should be practiced only when it is absolutely necessary, as in the small city or suburban fruit garden. It is my observation that when several fruits are crowded on the same area, nine times out of ten the amount of fruit produced and the degree of satisfaction derived would be far greater if the owner had been content with fewer trees and given each room to grow.



A PRACTICAL FRUIT FARM.

We often see apple trees with pears between them, currants tucked in between the pears, and strawberries tucked in between the currants. This is a very unsatisfactory combination except in the few cases where the grower keeps the soil very rich and gives each fruit special attention.

In the home fruit garden it is desirable sometimes to plant trees more thickly than they should stand after coming into full bearing, with the idea of taking out some of the trees when they have borne a few crops. Thus peaches are often planted between apple trees, and early bearing varieties of apples, like Yellow Transparent and Wagener, between the standard varieties. This plan is all right if the peaches or early apples are removed when the other trees need the space, but the majority of home fruit-growers will not do this. In most cases these fillers are not cut out at all, and the orchard becomes a brush-pile. Others cut them out eventually, but not until the permanent trees have been seriously weakened by the crowding. In general, then, give each fruit a separate piece of ground; but if your space is so limited that you absolutely must mix them, be careful to keep up the fertility of the soil and to

keep the several crops from crowding.

Usually it will be best to have the fruit trees by themselves in one orchard and to plant the small fruits in connection with the vegetable garden. The ideal home garden has along one side a row or two of raspberries, then blackberries and currants and gooseberries and strawberries; then the perennial vegetables, as asparagus and rhubarb, and finally the annual vegetables. It is much better to associate the small fruits with the vegetable garden than with the orchard, because they love the same kind of soil that is necessary for the production of choice vegetables—one that has been made rich and full of humus by liberal dressings of manure. If the locality is troubled with severe winds that are likely to injure the fruit it is well to plant a row of

has a limited space should consider all these things, because he wants to get just as many plants on his land as will do well. As a general guide, the following distances are suggested: Apples and sweet cherries, thirty to forty feet; pears, apricots, plums, peaches, and sour cherries, sixteen to twenty-four feet; quinces, sixteen feet; grapes, six by eight to eight by ten feet; strawberries, one or one and one-half by four feet; currants and gooseberries, four by six to six by eight feet; raspberries, four by six to five by eight feet; blackberries four by seven to six by nine feet.

In case dwarf apples or dwarf pears are used, the distances for these may be half those recommended for the standards; but some think dwarf trees are not so satisfactory in the home orchard. They require special care to be profitable.

There are many good methods of laying out the orchard. One of the best for small areas is to stretch across the field a line or wire on which the proper distances have been measured and marked with a tie of white string or cloth. As soon as stakes for one row is set this line is moved to the next. In this case it will be necessary to align the trees carefully when planting. If a wire is used, it will be better to mark the distances on it by wrapping around it a smaller wire, the ends of which are twisted tightly

so they cannot slip. In case the orchard is not to be more than twenty rods long a very convenient and effective plan is to stretch a wire between two stout stakes which are driven on a line with the row to be planted first, one at each end. The wire should be stretched two feet from the ground. The holes can then be dug and the trees planted immediately, after which the wire is moved to the next row. No stakes are required in this method, and the only measuring that it is necessary to do is the distance between the rows.

If several rows of one kind of fruit are to be planted, or of several kinds of fruit the same distances, do not plant the trees in squares, but in hexagons. More trees can be grown on the land, and they are distributed more evenly. To plant in hexagons, get a hatchet and as many stakes, twelve to eighteen inches long and of uniform size, as there are trees to plant. Take two small wires and make a loop in each end of both large enough to slip over the tops of the stakes. The length of each wire from center to center of the rings should be exactly the distance that it is desired to have the trees apart—say two rods. By measuring and sighting,

place one row of stakes along one side of the orchard site, marking the exact position of the first row of trees. To lay out the second and succeeding rows, slip a loop of one wire over the first stake and a loop of the other wire over the second stake. Pull the two wires taut until the two loops are together, the whole forming the letter V. This marks the position of the first tree in the second row. Place the wires over the second and third stakes in the first row, and locate the second tree likewise, and so, on for an indefinite number of rows. The trees in the first and third rows will be opposite each other, while those in the second are midway and alternating. Fifteen per cent. more trees can be put on an acre by this arrangement than by planting in squares, and every tree is equidistant from every other tree; in squares they are not.

Supplement all methods by careful sighting each way when planting. Make the rows straight. Crooked rows look slovenly.

Fruit on Every Farm.

No farm should be without fruit. A farmer who has a taste for fruit-growing, and land suitable for it, should have his orchards of such fruits as his local market calls for and of such varieties as succeed best in his locality. Where there is wise planning and thorough work the orchard may be the most profitable part of the farm. On the other hand, it may be a failure under neglect or mismanagement. A small quarter of an acre of quinces in a Massachusetts town last year gave a yield which in gross amounted to \$250, or at the rate of \$1,000 per acre. The ordinary planter could hardly expect to reach such results. But every farmer should endeavor to have a home supply of all those fruits that can be easily raised. Then lay out to raise them in such perfection as to easily take any market and the surplus will find a ready, profitable sale.

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Answers to Inquiries.

Old Iron to Prevent Black Knot.

Mr. C. A. Green:—Is old iron good to put into holes when setting out plum and cherry trees? I have been told by an agent for trees that it would prevent black knot.—E. M. Turner, Maine.

Reply: I have never heard of old iron being used to put in the holes when setting out trees to prevent black knot. I have no confidence in such a remedy.

Fruit Trees on the Lawn.

Mr. Chas. A. Green:—I have an acre of ground, and would like to know what kind of fruit trees are the best to plant on the front lawn that will make nice shade, and at the same time produce some income.—Albert Browning, Washington, D. C.

Reply: Cherry and apple trees I can safely recommend for the lawn. I have cherry trees on my lawn which are very attractive in blossom and in fruit. The fruit of the cherry is as handsome as it is possible to imagine and attracts general attention.

Planting in Minnesota.

Dear Mr. Green:—Kindly answer the following questions:

1. Which is the cheapest and yet lasting fence to separate one acre of ground from the rest of the farm, for garden and lawn?
2. What is the probable cost of such a cheap, durable fence?
3. What trees, berries and plants could one set out this fall so as to be reasonably sure of success? The place is in Franklin Co., Ohio.
4. In what manner would you set out trees on a two-acre plot so as to secure the greatest advantage; trees to form the nucleus for a fruit garden in that locality?—Phil. Laux, Minn.

Reply: 1. I recommend a heavy galvanized wire fence, but for myself would erect no fence whatever unless there were danger of cattle breaking in.

2. For price inquire at any hardware store.

3. In Ohio you can plant almost anything in the way of trees, plants and vines, but I do not advise planting largely the peach or strawberries. I would not advise planting as above in Minnesota in the fall where the winters are so severe.

4. I would plant apple trees in rows 3 or 4 rods apart, the trees being 50 feet apart in the rows. Then I would plant dwarf pear trees or cherry trees in each row of apple trees. Between the rows of apple trees, which are far apart, plant strawberries, red raspberries, blackberries, gooseberries, quince trees, plum trees, and whatever else you desire.

Where Certain Apples Succeed.

Mr. H. C. Schmitt of Indiana asks for information in regard to Stayman's Winesap, Winesap and Jonathan apples. He wants to know how they will succeed and grade up in comparison with other varieties in Indiana.

Reply: The above-named apples are those largely grown in the west and southwest. They are not largely grown in the eastern or middle states, therefore they are something of an experiment for Indiana, Ohio, New York, or Pennsylvania. They are apples of superior quality. I doubt whether they can be grown in the eastern or middle states and sold at prices paid for such apples as Baldwin or Greening, for I suspect they would not yield so many barrels per tree.

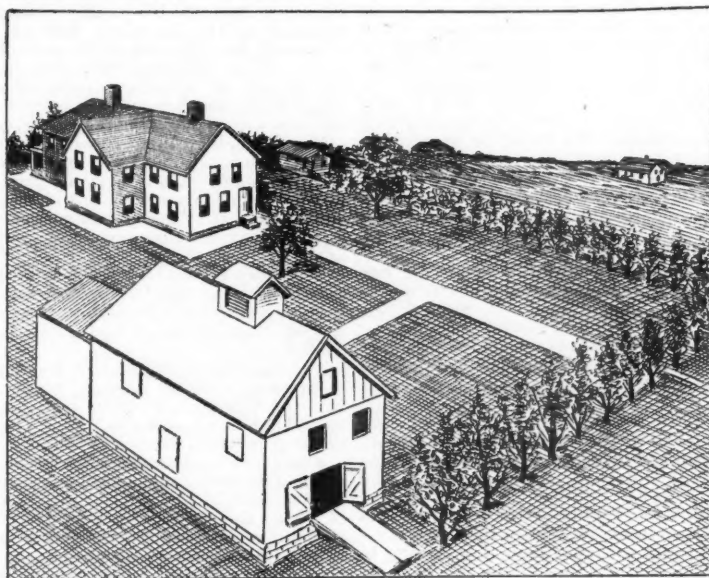
I am planting at my new farm near Green's Fruit Farm an apple orchard made up entirely of such high quality apples as Banana, Blenheim Orange, Delicious, Mother, Melon, Fameuse and its seedlings, Shawassee Beauty and McIntosh Red. But I would not plant of those varieties with the expectation of selling the fruit at the same price per barrel at which I am selling Baldwins and Greenings, for my impression is that it may cost more to grow these apples of superior quality than it does to grow some of the more common varieties. But I find there is a growing demand for apples of high quality. People of the wealthier class are beginning to learn the value of high quality apples and will pay \$6.00 a barrel for them when they could buy more common apples at less than half that price.

A New Apple Orchard on an Old Site.

Charles A. Green:—Is it advisable to set out an apple orchard on land where there has been an orchard and the trees cleared off on account of dying of old age. Some of the older residents say apple trees should be set on new land as trees set on the site of an old orchard do not do so well. If so can you give the reason.—Irving O. Grant, R. I.

Reply: While I would not hesitate to plant a new apple orchard on the site of

an old apple orchard where the old trees had been dug out and the land cleared, I will say frankly that I would prefer to plant the new apple orchard on land that had not been occupied previously by orchard trees. I am led to this reply by my experience in growing apple trees in the nursery. I find by experience that where apple trees in the nursery have been grown in the same soil over and over again the trees do not make as thrifty growth as they do on fresh soil where apple trees have not been grown in recent years. It seems evident that any particular crop, whether of grain or tree, takes up from the soil certain fertility particularly desirable by those certain grains or trees, thus leaving the soil somewhat impoverished in the particular food that the specified grain or tree most freely feeds upon. This would teach us that for the best results corn should not be planted often after corn, or wheat after wheat, apple trees after apple trees, or peach trees after peach trees, and so on. But trees are not such gross feeders on the nutriment of the soil as are corn, wheat and other grain. Trees feed more on the subsoil, the roots penetrating often to the depth of six or eight feet or deeper, while grains are dependent on the upper layer of soil. At Green's Fruit Farm we have planted young apple trees to take the place of old apple trees that had perished and the young apple trees thus planted made satisfactory growth and were productive.



The above drawing of dwarf pear trees is intended to illustrate our C. A. Green's idea of marking the boundary line on a village or city lot by the planting of fruit trees. He calls this a fruit tree hedge. There is no form of fence which is so permanent and can be introduced so cheaply as that made by the planting of fruit trees, where a line fence would have otherwise been built. No form of fence can be made so attractive as these fruit trees. Only consider for a moment the amount of fruit which can be grown on two sides of the ordinary city lot or village lot when planted along the line where a boundary fence usually is built. I have planted these trees as close together as one foot, and they have succeeded in growing a large amount of fruit of fine quality from such trees. But 2 to 3 feet apart is close enough for such border planting. I have used dwarf pear trees, peach trees, plum trees for this purpose, but apple and cherry can be planted, or different sections of the fence row can be planted to different varieties or classes of trees.

In order to keep the trees low headed they should be pruned much the same as hedges are, that is the tops and side branches should be clipped off each year. This clipping tends to make the trees more fruitful than they otherwise would be. At Green's fruit farm we have discovered that pear and apple trees which have been cut severely each year in order to secure scions for grafting and budding have yielded fruit, while other trees in the same row are barren.

The reader can see that if these fruit trees shown in the above illustration were scattered about the lawn they would obstruct the lawn so it could not be easily mowed or cared for, and the trees would not be as attractive if scattered over the lawn as they are if planted entirely out of the way on the border of the lawn. Here is something that I have not seen recommended by any other publication than Green's Fruit Grower. I made the discovery that trees would long remain in fruit closely planted getting the light and air from all sides, by finding fruit trees in the nursery row, less than 1 foot apart, bearing fine specimens abundantly. Bear in mind that if these hedge rows, as I call them, were not fully exposed to the sunshine and fresh air on both sides of the row they would not succeed so well.

To Buy or Not To Buy.

Mr. C. A. Green:—One of my neighbors went with a land agent to Geneva, N. Y., and bought 118 acres at \$135 per acre with good improvements, level land, with 3 acres of timber, 10 of grapes, 3 of plums, 5 of apples, and 300 pear trees. He has paid \$500 down. He is about to back out and lose his \$500. I told him I would write you and find out what you thought he ought to make from the place if he moves on the farm. The people here say that he had better lose the \$500, that he will not like it there, that he cannot sell the fruit, that the grapes won't pay for the baskets. He is farming 160 acres here, pays \$6.00 per acre rent, and clears from \$200 to \$1000 a year. If the farm he is on should be sold it would be hard to find another to rent here. Land is selling here for from \$200 to \$250 per acre.—C. G. Smith, Ill.

Reply: It is almost impossible for me to aid this man with my advice. It is true that vineyards at present are not generally very profitable. The best people to advise him are the people who live near the Geneva farm. Much depends upon the varieties of fruit growing upon that farm. I should rather lose \$500 than buy a farm which does not give promise of good returns. I bought a farm this past year of 100 acres for \$8000. It had to be sold in order to close an estate, the owner having died, and was probably sold at rather a low price. The

buildings though old could not have been built for less than the price I paid for this farm. There is not much fruit on the farm I bought. Farms from six to twelve miles of Rochester have been sold the past year for \$115 per acre.

Winter Melon and Early Melon Apples.

Green's Fruit Grower:—I think you have quite a collection of apples on your place and I would like to find out about the Melon and Early Melon apples. Have you them in bearing? Downing describes the Melon as one of the very best varieties ripening in early winter, but some two or three nurserymen I find sell a variety they call the Early Melon. How is this?

I wish Green's Fruit Grower would describe and tell about good old varieties. I think we are liable to let some valuable old varieties pass away in the rush for the new ones.—Chas. L. Todd, N. Y.

Reply: Yes, we have the Melon apple, a winter variety, in our specimen orchard of over 100 varieties. The Early Melon I have not heard of and it is probably some inferior variety. The Melon is a reddish apple of medium size and of the highest quality. It is not so heavy a yielder and could not be grown so cheaply as the Baldwin. In order to make the Melon apple profitable you would have to get double the price you do for the Baldwin. All apples in certain soils and

Reply: You must not confuse the method of pruning peach trees with the method of pruning apple trees, for the methods are not the same, and yet you seem to think that the kind of pruning that will do for peach trees will do for apple trees, which is a mistake.

Then again, no person can make an expert pruner or tell precisely how trees should be pruned by letter of by any form of writing. It is difficult to teach pruning if one takes the student to the orchard and cuts the branches off and explains to him why they are cut off, if you consider pruning as a fine art, which it is.

Remember that your peach and apple trees will thrive and bear fruit without any pruning at any time in their history, but judicious pruning is remarkably helpful and should be studied with care by every fruit grower. It is much easier to overprune an apple tree than it is to overprune a peach tree. The new growth of peach trees, that is the growth made the previous season, should be cut back at least one-half its length each year after planting, but no such pruning is recommended for the apple tree. In pruning the apple tree you simply form the proper shape of the head, thinning out surplus branches or branches that cross each other. When you plant a peach tree every branch should be cut off, leaving simply a straight stick cut back two feet above the ground.

Growing Nuts in Arizona.

Prof. H. E. Van Deman:—Kindly give me your opinion as to growing nuts for profit in western Arizona, at elevation of 1000 to 2000 feet, on rich irrigated land, especially Persian walnut, pecan, Japan chestnut, filbert, also how should the common hickory, butternut, and black walnut grow there for timber and nuts.—C. Irving Page, N. Y.

Reply: From the little I have seen of Arizona and know of the soil and climate from those who have had experience in growing fruits there, I believe that the best nut to grow is the almond, although I might be mistaken about this. A place where spring frosts would not kill the bloom would be one of the things to know about reasonably well before planting. The Persian walnut and pecan might do very well if the soil is deep and rich and the water supply abundant. The hickory and chestnut I would not expect to flourish but they might be tested in a small way. Filberts need a cool, moist climate and Arizona is dry and hot, being very unfavorable. The peach does well there in some localities but the apple and pear must be planted well up and out of the hot valleys and where water is sure for irrigation. The date is one of the fruits to grow in the hotter parts of Arizona. I saw this many years ago, when in the government service, and sent to Africa for plants of the best varieties known, and had them planted at Phoenix over 20 years ago, where they are now fruiting, as I know by having gathered and eaten dates from them three years ago. If the right varieties are planted there on the right soil and well cared for they will give good returns.—H. E. Van Deman.

WIFE WON.

Husband Finally Convinced.

Some people are wise enough to try new foods and beverages and then generous enough to give others the benefit of their experience. A wife writes:

"No slave in chains, it seemed to me, was more helpless than I, a coffee captive. Yet there were innumerable warnings—waking from a troubled sleep with a feeling of suffocation, at times dizzy and out of breath, attacks of palpitation of the heart that frightened me.

(Tea is just as injurious as coffee because it contains caffeine, the same drug found in coffee.)

"At last my nervous system was so disarranged that my physician ordered 'no more coffee.' I capitulated.

"Determined to give Postum a fair trial, I prepared it according to directions on the pkg., obtaining a dark brown liquid with a rich snappy flavour similar to coffee. When cream and sugar were added, it was not only good but delicious.

"Noting its beneficial effects in me the rest of the family adopted it—all except my husband, who would not admit that coffee hurt him. Several weeks elapsed during which I drank Postum two or three times a day, when, to my surprise, my husband said: 'I have decided to drink Postum. Your improvement is so apparent—you have such fine color—that I propose to give credit where credit is due.' And now we are coffee-slaves no longer."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be boiled.

Instant Postum—is a soluble powder.

A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. Grocers sell both kinds.

"There's a Reason" for Postum.

localities do better than in others.

I think you are right in seeking information in regard to old varieties with which many people are not familiar and such is the case with the Melon apple.

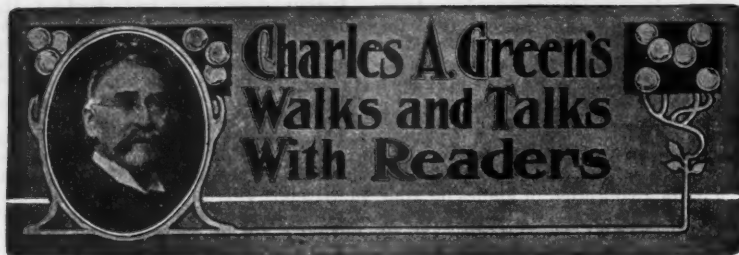
Pruning the Apple and Peach.

Dear Sir:—After studying the different fruit growing publications, yours, included, I came to the conclusion that all apple and peach trees should be cut back each year from one-third to one-half the previous year's growth. I supposed this meant all limbs necessary to get the proper shape to the tree. On page 2 of Green's Fruit Grower in answer to an inquiry you say—"each year after the first year the most you have to do is to visit each tree and cut out any straggling limb which seems to be out of place etc." I have two nice apple orchards, growing, also 100 peach trees, all bought at Rochester, N. Y. Some of these were set three years ago and some two. Each year I have been very careful to cut back nearly all the branches. Am I on the wrong track?

On page 3 you say, "be careful not to cut away too much wood in any one year, etc." These trees are 1, 2 and 3 years old.

Kindly inform me whether or not to cut my trees back from now on, or shall I only cut out straggling limbs and any that may extend too far in any direction.

—G. W. Ellithorpe, Ind.



Charles A. Green's Walks and Talks With Readers

"Think nothing done while aught remains to do" said Napoleon.

ROCHESTER, N. Y., JANUARY, 1914

Labor A Blessing.

Have you ever thought what would occur in this world if there were no labor, if every one had nothing to do but to enjoy himself at his leisure? Consider this question for a moment. There would be no coal mined, no farms worked, no plowing or reaping, no railroads in operation, no one to make our clothing, no one to sail ships, no policemen to protect from robberies and murder, no one to teach or instruct, no one to preach, no one to cook our food. We could not cook our own food because in doing this, we would be working. By this argument, you will see that to stop all labor means death to every human being. But assuming that it did not mean death and that people could through some method live without work, think of the difficulty people would have in passing away the time, how affairs would stagnate and continual riot would occur, for it is a notable fact that idleness leads to misconduct.

The Joy of Life.

Have you felt the joy of living? If you have not, something has gone wrong. Can you remember when you felt the joy of living and when you ceased to feel the joy of living?

I am well along in years. Some people would call me an old man, but I feel that I am but a boy. I have had my troubles, and yet, I can say that in every year of my life I have felt the joy of living, and never more have I felt the joy of living, than in the last few years when I have been approaching old age.

Our Creator intended that we should enjoy life, that we should be happy; but in order to be happy, we must do our part, we must not yield to despondency. We must fight despondency as we would the attack of a wild beast. We must look on the cheerful side of things. We must be hopeful. We must expect good things. When winter comes, we must look forward to the spring. In the spring, we must look forward with joy to the coming summer. In summer, we must anticipate the beauties of autumn.

Instinct.

When there is no accounting for the intelligence of animals, when scientific men do not desire to credit the lower animals with having intelligence, they call their intelligence instinct. Both men and animals sometimes act from instinct, but it is my opinion that both men and animals sometimes act from intelligence. Animals do not recognize their friends and give expression of affection from instinct. All animals are alike in some respects.

A hunter tells me of an instance in the Adirondack mountains where he saw three deer come down the trail by the lake shore followed by hounds at a distance. After the deer had passed down the lake shore about a quarter of a mile, they leaped into the lake and swam back near to the point where he stood hiding in the bushes not five rods from the trail which they were following when the dogs were pursuing them. The dogs followed the old trail down the lake shore a quarter of a mile where the deer went and then lost their scent, since there the deer had gone into the water. As a result the deer were safely ensconced in the rear of the dogs without any tracks or scent being left by which they could be reached by the dogs. Surely this could not be called instinct. It was intelligence.

Indian Summer.

Every bright sunny day of autumn when the coolness of the air is tempered by the warm rays of the sun, is apt to be called Indian summer. The question arises. Is there such a thing as Indian summer? The answer possibly is, there is no such season, and yet many will contend that there is. I suspect that the name Indian summer was attached to that fall season when the Indians were accustomed to burn over wide tracts of land in order to clear the soil of dead grass, weeds and rubbish, which tended to induce a more vigorous growth of grass or other crops the next season. In the past, the air was filled with smoke from these extensive fires. These smoky days were called Indian summer days, but there is no harm in our continuing to think of an Indian summer-time which may prevail any time from October first, till Thanksgiving.

If there is no such season as Indian summertime in the outdoor world, I am certain that there is such a season in a more spiritual sense in the life of mankind. Every human life has in it a springtime, a summertime, an autumn and a winter. Let us hope that between the autumn and the winter of life, there are many bright and happy days which we may term the Indian summer days of life.

The Pine Tree.

Shaggy shade of desert-loving pine, whose emerald scalp Nods to the storm. —Byron.

This tree is typical of all evergreens. There are people who call all evergreen trees pine trees, not being able to distinguish between the pine, hemlock, spruce or balsam. How greatly these coniferous trees beautify the winter landscape. When the deciduous trees have been bereft of every leaf, with the exception of the oak, the pine and its companions gleam forth in all their glory. There was a time when the pine occupied a large portion of this continent. Its value for timber, the erection of houses, ships and docks, soon caused the pine trees to be sacrificed until now there is scarcely a white pine forest within the confines of the eastern or middle states except those few retained for their beauty on private estates.

Near the homestead farm where I was born, a hard wood forest was cut down. Immediately thereafter a pine forest sprang up, forming a beautiful object and a rarity, for that was the only pine forest for many miles around. Many people wondered at the source of these pine trees. Whence did they come? Why should they spring up where no pine trees had been seen before? Probably the answer is that the soil had in previous ages been occupied by a pine forest and that the seeds of the pine trees had remained in the soil. It has been noticed that the seeds of some plants will remain in the soil for fifty or a hundred years without destruction, owing to their oily character. These seeds being deeply buried spring into rapid growth on being exposed in later years.

Have you noticed the song of the pine tree? When the breeze moves through the boughs a mournful dirge is heard. Some people object to the pine tree on account of this dreary music.

A Blue Day.

It is possible that there are individuals who have no blue days, but such individuals are rarely met. For the most of us there are days when everything seems dark and dreary. We are apt to be inclined to the opinion that the blue day is not owing to us or our physical or mental condition, but that it is owing to the changes for the worse in affairs outside of us; but surely when we stop to study the situation, we can see that the world itself and humanity have not changed. Then we will come to the truth of the matter and find that we have a fit of biliousness or of weariness owing to overstrain or anxiety and that the trouble is in fact all within ourselves.

Aside from the care of our bodies, nothing will do so much to make blue days bright as to search for congenial work and devote ourselves assiduously to that work. If you cannot think of anything else, better set yourself to clearing up the home grounds and making plans for beautifying them. Most people have become so accustomed to the condition of the grounds surrounding their homes they appear to be satisfied with them even though they are really in a dilapidated condition or need ornamentation. Perhaps there is a partly broken-down fence surrounding your place. If so, you can beautify your home by repairing it, or what is better, by taking it away altogether. I have seen rural homes greatly beautified by simply removing the fences around the house and grounds. Perhaps the sod on the lawn is uneven, full of holes and full of weeds. If so, re-grade the lawns by plowing or spading up, or that which is easier, by drawing in and spreading over the lawn good rich soil from the fields, being careful to fill the holes in the lawn and makes the passage of the lawn mower easier.

Perhaps the garden needs slicking up and enriching. Perhaps you have no fruit garden. If so, make plans on one of your blue days for setting out the raspberry, blackberry, currant, and trees such

as the apple, peach, pear, plum, cherry and quince. There is no better investment in money than in beautifying the home and the home grounds, and such work as this will do much to dispel a blue day.

Mistakes In Pruning.

There are few people who understand thoroughly the art of pruning. There are many people who can prune certain trees, shrubs or vines correctly, who are altogether lacking in information or study regarding other trees, plants and vines. The point I make is that there is a vast difference in the manner in which different trees, different shrubs, different vines should be pruned.

I have before me an article giving instructions in pruning, in which the writer says, "In pruning currant bushes, cut out all the old wood and thin out the poor shoots. Trim gooseberries in the same way you do currants."

This advice is radically wrong, for if you should cut out all the old wood of your currant and gooseberry plants, you would not have any fruit on these bushes next year, since the fruit buds on currants and gooseberries always appear on the old wood and never on the new wood. But many people, well informed generally, think that because they should cut out the old wood of the red and black raspberry and the blackberry, that the same should be done with the currant and gooseberry, but this is erroneous.

Then again, many will assume that the raspberry and the blackberry should be trimmed much the same, but this is erroneous, for if you cut off the ends of the new wood of the blackberry, you would be cutting off a large portion of next year's fruit, which would not be so much the case with red and black raspberries.

Many people cannot see why the plum and cherry tree should not be pruned in the same manner that you would prune an apple, pear or peach tree, but it must be remembered that wounds on a cherry or plum tree are far more serious than on an apple or pear tree, therefore plum and cherry trees should be pruned as little as possible. I have known plum and cherry trees to perish after large branches were cut off from them. The wounds never healed.

The same method that will be adopted in pruning a strong growing grape vine like the Concord, Worden or Niagara, should not be practiced in pruning slower growing varieties like the Delaware grape.

There are certain ornamental shrubs which if pruned as most shrubs are pruned would result in the loss of nearly all the blossoms the ensuing spring. Herein is evidence of the fact that the man who has a general knowledge of pruning of the many different kinds of fruit bearing trees, shrubs and vines and of the many different kinds of ornamental trees, shrubs and vines, is a man difficult to find, for there are few who have made a study of this subject in its broadest sense. I almost feel like saying that it is safer and wiser not to prune at all than to prune indiscreetly or without knowledge of the subject.

Mistakes In Applying Fertilizers to Trees.

As I was riding for pleasure today, I saw hundreds of large trees that had been planted 15 or 20 years ago that had just received an application of manure. From two to three bushels of rotted manure of the most valuable kind, that is sheep manure, had been placed close to the trunks of the trees within a circle extending only about two to three feet from the trunks. I was surprised for the reason that the manager of this extensive estate is a man of large experience. He gives these trees his personal attention. They are carefully examined for insects and in every way their needs are looked after.

It would seem that the readers of Green's Fruit Grower need not be told that this fertilizer was misplaced, and that the feeding roots of these trees were not those close to the trunk of the tree, and that the tree could be but little benefited by the application of such a valuable fertilizer in such manner. The larger part of the feeding roots of these trees were from 12 to 20 feet distant from the base of the trunk. This manure should have been scattered broadcast over the ground a little further than the branches of each tree spread.

These trees were growing in sod. Since the proprietor had plenty of money, I noticed that he had cultivated the soil for a distance of two or three feet from the trunks of all the trees. Here was another mistake, for the growth of the tree could not be aided by such trifling cultivation close to the trunk. If the cultivation of the soil was desired the cultivation should have extended as far as the branches of the trees spread.

If such mistakes as these can be made on the estate of a capitalist, under the management of a man drawing a large salary, and supposed to be skillful, what shall we expect of the management of trees by the average citizen, who does not pay much attention to the subject. Certainly there is a vast amount of mismanagement

of orchard and ornamental trees, also of vines and plants. Considering this lack of proper treatment it is a wonder that the trees of this country produce as good results as they do, but we must remember that all kinds of trees have grown on this continent for many ages before the advent of man without any attention whatever except that given by nature in the falling showers, the action of the frost, the fanning of the breezes, and in such fertility as nature provides. This continent has been largely clothed with the foliage of the trees and shrubbery that I have spoken of. In a measure such creations have the ability to care for themselves under circumstances that are not favorable. We find trees growing far up toward the mountain tops where the soil is thin and the climate exceedingly cold. We find them growing where there is scarcely any moisture in the soil, where the land is something like a desert. In the Rocky mountains I have seen trees large enough to be sawed into lumber which have grown in the cracks of the rocks of the mountain where it would not seem as though there were enough soil to protect the tree for a season. But where trees receive intelligent care, their growth and production is largely increased.

A Dream of Youthfulness.

The door of yesterday is closed and locked. We cannot re-enter this door today or tomorrow or next year, and correct the mistakes of yesterday. Opportunities for benefactions, for making others happy, for adding to our own welfare, were lost forever when the door of yesterday was closed and locked.

Youth is a closed door to the most of us. Never again can we enter that door except in our dreams. Last night I dreamed that I was again a boy on the farm. I was accompanied on a short journey by an old sweetheart, a beautiful and accomplished maiden, who possibly never knew of my love. In my dream, I was married to this maiden. She held in her arms a babe. In this dream of yesterday, I felt the ecstasy and hopefulness of youth. What a great thing it is to be young and yet how few young people appreciate this gift of the Creator of youthfulness. Some people do not appreciate youthfulness because they cannot realize that it will ever depart. They cannot realize that the hair will turn gray and the head bald; that the eye will be dim, the face wrinkled, the form bent, and legs and feet decrepit.

I believe that every period of life has its peculiar joys and blessings and sorrows. One of the sorrows of old age is the departure of relatives and friends on that long journey from which there is no returning. Every aged person has the assurance that if his life is spared, he must be present at the funeral of many of his dearest friends and companions.

Too Much Modesty.

We all admire the modest man. We are tempted to look askance at the blow hard, the man who is always boasting of his achievements; but there is a point at which modesty ceases to be a virtue. It is possible for us to be too modest.

Humanity is not as a whole over-modest, therefore the individual who goes to excess in modesty is apt to be looked down upon as incompetent and perhaps justly so. It is even possible to be so modest as to induce friend or acquaintances to consider that the individual is vain of his excessive modesty.

I am led to this thought by an enterprise conducted by a large and successful social club. The affair was left in the hands of a committee. This committee went ahead and managed affairs without diffidence, each member making himself conspicuous as a leader in the enterprise. This struck me as eminently proper, but the over-modest man would have striven to hide himself and make it appear that somebody else was doing the work, when in fact he was doing it himself.

There are occasions when we as individuals, should stand in the front of the stage boldly. Such an occasion occurs when you or I have been the originator of some event or enterprise. We are the originators. Success has been dependent upon you or me, therefore it is our duty to face the world and follow the enterprise.

As a young man I was remarkably bashful and timid, shrinking from publicity. As a young man, I organized an institution now conducting a business of over \$10,000,000. After organizing this association and getting the bill of organization through the state legislature, I called the gentlemen together and modestly stepped aside. I did not even make myself a member of the association, which I could have done and should have done.

I was a candidate for secretary and treasurer of this association, and at the first meeting of the board I received all of the votes but one. Not being present at these meetings as I should have been, I continued to lose votes at subsequent meetings until finally another man was elected in my place. Here is an illustration of undue modesty.

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I'm Sick of the City, Sary.
By H. H. Johnson, Sent in by Daisy Reed, N. Y.
I'm sick of the city, Sary; I sigh for the old farm
home,
For a sight of the fresh, green pastures where the
cattle used to roam;
I sigh for the dear old homestead where we have been
so happy, wife;
'Twas foolish in me to sell it; 'Twas the blunder of
my life.

I'm sick of the city, Sary; I wish we were back agin'
A plantin' an' a hoein' an' reapin' an' gittin' the
harvest in,
A seein' the trees a leavin' and the corn a tasselin'
out,
And watchin' the grass in the springtime, to see it
beginnin' to sprout.

I'm sick of the city, Sary; the houses are standin'
so thick;
You look any way you're a mind to, there's nothing
but mortar and brick;

I'm sick of the city, Sary; I'm sick of the noise an'
the crowd,
I'm sick of seein' the poor folks oppressed by the
rich an' the proud.
I want to be back in the country, where there ain't
so much show an' pretense,
Where character makes a man honored, instead of
his dollars and cents.

I'm sick of the city, Sary; It ain't what we thought
it would be;
The rustle an' roar of business aint meant for such
plain folks like we,
It sets all our nerves in a quiver, an' gives us a shock
of affright,
To wake up an' hear such a clatterin' along in the
dead of the night.

Midnight.

By C. A. Green.

I think it is in Hamlet, where Shake-
speare says: "It is now the witching hour
of night when graveyards yawn and hell
itself, breathes out contagion to the
world." It is indeed the witching hour.
While I am a good sleeper, I sometimes
awaken at midnight. How active then
is my brain. I think of the sleeping mul-
titude in the city below, many in haunts of
vice, many couched beneath trees and
shrubbery in the open park or field, others
snugly ensconced in happy farm homes
scattered widely over this vast continent.
Now the burglar steals from behind the
dark shadows and watches intently to dis-
cover whether he may safely enter the dwel-
ling or bank which he has been planning
for days or weeks to plunder. Now the in-
cendiary prepares the slow, burning torch
which is to ignite the home or factory, the
proprietor of which has displeased him.
Now the thrower of bombs places the de-
structive package where in a few moments,
which enables him to flee to a safe dis-
tance, it will do the greatest destruction
in blowing up the building in which inno-
cent people are sleeping.

Unable to control my thoughts, I arise
and pass to the window, looking out upon
the stars. How beautiful they are in their
azure setting. What thoughts they sug-
gest. Not far away is the cemetery, city
of the dead, containing 50,000 population.
I hear a cry. Is it a woman in distress?
No, it is the screech owl searching for his
prey. Far away over the hills I hear the
crowing of the cockerel and then answers
from other cockerels far and near, sound-
ing like a midnight serenade. In the
shade tree near my window, a sparrow is
talking in its sleep. It is but a brief song,
but it quiets my nerves as I return to my
couch and soon fall asleep.

THE RIPENING OF FRUITS.

Its Artificial Regulation is Bridging Time and Distance.

The practices of modern commerce in
regard to the artificial ripening of fruits
furnishes a subject for comment in The
Journal of the American Medical Asso-
ciation. With the growing knowledge
of what the ripening of fruits really in-
volves, says the writer, we are certain
to acquire better ideas of what a properly
ripened product should really be.

We are told why unripened (Winter)
apples are unfit to eat in early Fall; it is
because instead of sugar they contain a
large amount of raw starch, which will
disappear with the "mellowing" process.
This is now understood in a more intelli-
gent way than heretofore. With this in-
creased knowledge, those who handle
fruits commercially are enabled to regu-
late and facilitate the processes of ripening
by artificial means, and hence it becomes
possible to dispel the limitations hitherto
placed by seasons and distance. Says
the writer:

"The place which fruits are assuming
in the dietary of man is one of growing
importance. Certain species, like the
apple and pear, the plum and the grape,
have long enjoyed a deserved popularity;
others which were once among the rarities
in the United States are now finding wide-
spread favor. Melons and other fruits
are now being shipped by water from the
tropical regions where they are grown to
the centres of distribution. Bananas,
which were found only in a few seaboard
towns a generation ago, are now common
in every region of America. In Great
Britain, where they were little known
less than two decades ago, they are now
the 'poor man's fruit.'"

"The ripening of fruits plays so im-
portant a part in their availability and
in some of the problems of transportation,
that authentic information on this subject
is much to be desired. Some fruits, like

GREEN'S FRUIT GROWER

AN ILLUSTRATED MONTHLY JOURNAL

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NOTICE TO SUBSCRIBERS:—If any subscriber has been defrauded by any advertise-
ment appearing in Green's Fruit Grower he will do us and the public at large a service by at
once reporting this advertiser to us, giving full particulars, we will upon receipt of full
particulars, investigate and will do everything in our power to bring about a satisfactory
adjustment.

Subscribers who intend to change their residence will please notify
this office, giving old and new addresses.

Entered at Rochester (N. Y.) Post Office as second class mail matter.

the apple, may be allowed to ripen almost
fully on the tree and may be kept in the
ripened condition for relatively long
periods, if proper attention is paid to their
manipulation and storage. Other fruits,
like the berries, cannot be kept in the
ripe condition very long before deteriora-
tion and decay set in. In still other
cases, as with the banana, the fruit may
be picked and transported advantageously
before the final ripening has begun, and
this process can then be controlled in the
market and home as the conditions de-
mand.

"The physical changes, like the varia-
tion in color of ripening fruits, are familiar
since they are evident to the senses;
but these alterations are merely indicative
of changes in the chemical make-up of
the fruits under the conditions which
determine ripening. Heat, moisture, air,
and light may all participate in deter-
mining the characteristic changes that
ensue. Laboratory investigations in re-
cent years have given clearer indications
of what takes place.

"Among the changes are the transfor-
mation of starch into sugar, the conver-
sion of soluble tannin compounds with
their astringent properties into insoluble
forms, the actual lessening of the quan-
tity of acid, or the masking of the acid
flavor by the accumulation of sugar, the
softening of woody tissue, and the increase
and storage of water in the form of juice."

Forty-Ninth Annual Meeting of the Western New York Horticultural Society, January 28, 29 and 30, 1913.

For fifty-nine years the Western New
York Horticultural Society has held its
meetings, and the fruit-growing industry
owes much to the accomplishments of this
organization, which is both the oldest and
largest association of fruit growers in the
Empire state. The gathering of January
28th, 29th and 30th will be a memorable
one, the program containing several
attractive features. Among the out-of-
State speakers will be the always-welcome
Professor S. A. Beach, of the Iowa College
of Agriculture; Dr. Lipman, director New
Jersey Agriculture College Experiment
Station; a Michigan peach-grower, etc.

A large aggregation of spray rigs, etc.,
is already arranged for. Liberal prizes
are offered in the competitive class for
fruits, such as a solid silver cup, several
large cash prizes for boxed fruits and col-
lections, and the usual cash prizes for
single plates. Those wishing further
information regarding the fruit entries
should at once communicate with John
Hall, secretary-treasurer, 204 Granite
Building, Rochester, N. Y., also for
copies of program when ready.

A Skiddoo Orchard.

Up at East Medford, or West Yapkank
or North Patchogue or South Coram,
where the Long Island Railroad Experi-
mental Station Number Two is located,
is a small orchard of dwarf apple and pear
trees, planted by a Long Island girl in
the early Spring of 1911. This year, when
its owner had reached her fourteenth
milestone on the road of life, her orchard
celebrated in rather a quaint way. The
Bismarck apple produced twenty-three
glorious red-checked big ones, the smallest
one weighing three-quarters of a pound,
and the largest just under sixteen ounces,
says Long Island Agronomist. Twenty-
three superb Jonathan apples were also
in evidence, their brilliant coloring and
shape attracting attention instantly. The
modest Lady apple had twenty-three of
these miniature apples, so popular for
Christmas tree decorations, snuggled
down in a compact bunch just at the top

of the trunk where the branches fork out.
The pears were far more modest, the
Bartlett bearing three, the Angouleme
having two huge specimens, one weighing
one and a quarter pounds, and the other
three-quarters, while the Louise Bonne
had thirteen handsome, beautifully color-
ed pears. That these fruits were high
class is proven by the fact that the Lady
apple took first, and the Louise Bonne pear
took first, in their class at the Riverhead
Fair. These dwarf apples and pears have
proven out winners so many times that
we do not hesitate to recommend them,
particularly for people with small acreage
who wish a variety of fruit, and we feel
very confident in predicting that on Long
Island, as in France, they will prove a
commercial success, because in every case
where we have tried them out, at Hunt-
ington, at Garden City, and at Medford,
they have been particularly satisfactory,
the fruit in all cases being larger than
fruit on standard trees, the specimens
being almost universally perfect, their
color and flavor invariably being exceed-
ingly fine.



That Ancient Feeling.

First freshman (at football game)—I've
yelled so hard, I feel like the Centaurs.
Second child—How's that?
F. F.—Half Horse.—Yale Record.

Where to Look for Laborers.

Will you do us the favor of kindly draw-
ing the attention of your readers to the
large number of able-bodied and willing-
spirited men, who are seeking employment
through the Bowery Mission Free Labor
Bureau.

We have received the above request
from The Bowery Mission and Young
Men's Home, No. 227 Bowery, New York
City. This Mission is a worthy enter-
prise managed by a number of noted phil-
anthropists of the East. Green's Fruit
Grower takes pleasure in calling attention
to the fact that those requiring men to
aid them in their work stand a chance of
securing them by applying to the Bowery
Mission as above.

Bear in mind, however, that no one can
guarantee satisfaction from the men they
secure in this manner. But you can rely
upon what the Bowery Mission tells you.
There must of necessity be some risk in
engaging laborers no matter where they
come from.

Newest Notes of Science.

The United States imported fruits and
nuts worth \$90,000,000 in the last fiscal
year.

In a new oven invented by a Denver
man meats are cooked in air heated by
electricity and compressed by a motor-
driven pump, which is claimed to reduce
shrinkage to a minimum.

An electroscope for detecting the
presence of radium discharges, so delicate
that it measures current strengths as
small as one ten-trillionth of an ampere,
has been made in Paris.

Following an old custom, most of the
monuments in a cemetery in a Maine
town bear on one side photographs, suit-
ably protected against the weather, of
the persons buried beneath them.

The death rate in the Canal Zone so far
this year has been 21.18 per thousand of
population as compared with 49.94 per
thousand the year before the United
States began its control.

Throughout the world one-fourth of all
children die before 6 years of age, one-
half before they are 16 and only one in
each 100 lives to the age of 65.

A motor driven plow of English inven-
tion automatically guides itself over a
field after it has plowed the first furrow
under the direction of a human mind.

A handy new fire extinguisher for house-
hold use contains two liquids which, when
combined by turning the device over, e-
jects a heavy flame-smothering foam.

The double track electric railroad
which is being built between Tokio and
Yokohama will be the most up-to-date
in the Orient when finished early next
year.

Colored glass hoods, to be slipped over
incandescent lamps and fastened with
clips, have been invented for temporarily
changing the colors of electric lights.

A telephone which is claimed to be
explosion proof and flame proof has been
invented in England for use in mines or
anywhere that explosive gases or liquids
are present.

The Farmer Who Retires.

The farmer who plans to "retire" and
go to the city must be sure he knows what
he is doing, says The Farmer's Guide.
He must agree to give up the farm so far
as it applies to city living. He can still
own and control his farm but he can't
"farm" if he has "retired." Unhappiness
is not to be thought of, but it is a very
unwelcome visitor when it does come.
An unhappy farmer living amid the roar
and bustle of the city with nothing but
brick walls for a horizon and high board
fences for boundaries is to be pitied. It
is as if his farm were still there, but, lo!
it has magically shrunk to the dimensions
of a common barn lot! No, you can't
make the city the country. It would be
nice if you could, for it would give the
city residents some idea of what real
freedom is and a taste of real living. The
rural dweller knows what it is, and this
same fellow may later have the very
peculiar feeling come over him that he
would like to go by the name of a "retired
farmer," but he must be very, very sure
whether he wishes to give it all up.

BETTER POSITION.

And Increased Salary as a Result of Eating Right Food.

There is not only comfort in eating
food that nourishes brain and body but
sometimes it helps a lot in increasing
one's salary.

A Kans. school teacher tells an inter-
esting experience. She says:

"About two years ago I was extremely
miserable from a nervousness that had
been coming on for some time. Any
sudden noise was actually painful to me
and my nights were made miserable by
horrible nightmares.

"I was losing flesh all the time and at
last was obliged to give up the school
I was teaching and go home.

"Mother put me to bed and sent for
the doctor. I was so nervous the cotton
sheets gave me a chill and they put me
in woollens. The medicine I took did me
no apparent good. Finally, a neighbor
suggested that Grape-Nuts might be
good for me to eat. I had never heard of
this food, but the name sounded good so
I decided to try it.

"I began to eat Grape-Nuts and soon
found my reserve energy growing so that
in a short time I was filling a better po-
sition and drawing a larger salary than
I had ever done before.

"As I see little children playing around
me and enter into their games I wonder
if I am the same teacher of whom, two
years ago, the children spoke as 'ugly
old thing.'

"Grape-Nuts food with cream has be-
come a regular part of my diet, and I have
not been sick a day in the past two years."
Name given by Postum Co., Battle Creek,
Mich. Read "The Road to Wellville,"
in pkgs. "There's a Reason."

Ever read the above letter? A new
one appears from time to time. They
are genuine, true, and full of human
interest.



Fruit Helps

By Prof. H. E. Van Deman,
Associate Editor.

FRUIT WEEK AT WASHINGTON, D.C. Report of American Pomological Sessions.

Editor Green's Fruit Grower:—There was a notable gathering of the fruit and nut growers of the country at Washington, D. C., from the 17th to 22nd of November last. The American Pomological Society, the Eastern Fruit Growers Association, the Northern Nut Growers and the Society for Horticultural Science all met together there at that time. There were also extensive exhibits of fruits and nuts. All the meetings and exhibits were in the beautiful new National Museum, which was a most commodious and fitting place for them.

Mr. L. A. Goodman of Missouri, president of the American Pomological Society, opened the series of meetings and the blessing of the Great Creator was invoked by Dr. Jos. T. Kelly of the Presbyterian Church. The address of welcome was from Mr. Wm. A. Taylor, Chief of the Bureau of Plant Industry of the U. S. Department of Agriculture, in which he happily alluded to the fact that this city was largely the property of the people of the nation and that the members should feel at home. It had been 22 years since the last meeting of the society here and in that time there had been amazing progress in American fruit and nut growing. There had passed away in that time many of the older members of the Pomological Society, notable among them William Saunders of this city, who had, among other things he did for American pomology, introduced the navel orange from Brazil, and thus almost created the main citrus industry of California and blessed the entire country. The responses of Mr. G. L. Taber of Florida and Prof. W. T. McCann of Canada were delightfully made.

There was a display of fruits and nuts that represented many sections of the country, from Canada to southern Florida and from ocean to ocean. The best commercial exhibit was of boxed apples from Virginia. There were several extensive collections of crossbred seedling apples from the Experiment Stations, including those of Canada, New York and Missouri and several smaller lots from private experimenters and chance seedlings. These efforts to produce new apples of superior qualities showed material progress. The Delicious apple was shown to great advantage in several exhibits. There was a large number of varieties of citrus fruits from northern Florida which were mostly the result of crosses made by officials of the U. S. Department of Agriculture between the sweet or edible oranges and the citrus trifoliata, which is a very hardy species that bears small and acid fruit. There were among them some varieties that may prove hardy enough to withstand slight freezing and bear edible fruit, but none of them equal in quality the ordinary oranges. There was a very large assortment of grapes, many of them being foreign varieties grown in the experiment vineyards of the government in California. The most attractive exhibit of all was that of tropical and semitropical fruits from Miami, Florida. It included all species of citrus fruits known to culture and many such things as the cocoanut, pineapple, ceriman, papaya, avocado, sapodilla, carissa and many more that are rarely seen except in the tropics where they grow. In this collection were two very large clusters of pomelo (grape fruit of the markets) and a number of single specimens from trees that I had planted on property in which I am largely interested, and they were so beautiful that not only the visitors were charmed but I was surprised and very proud of them myself. The exhibits of pecans, walnuts, chestnuts and other nuts was large and deeply interesting, showing in part that the northern and eastern states are producing good nuts as well as the southern and western sections, although in far less quantities as yet. The possibilities in the way of good and productive varieties of the Persian walnut, the Shagbark hickory nut and our native hazels are only dreamed of as yet.

The first topic of discussion was: "Some Problems The Practical Orchardist Must Meet," by S. H. Fulton of West Virginia. As he is in direct charge of one of the large commercial orchards in the upper Potomac region he knows from practical experience about the troubles that beset the fruit grower. He found that to prune

before severely cold weather damaged the trees, and that it is much safer to prune towards spring, although it gives less time in which to do the work. Spraying with the ordinary style of compressed air machines has made necessary much difficult and expensive hauling of them about to refill and recharge with compressed air. He finds the style called "airtight" machines a great saving in this respect because the charging is done in the orchard and the filling with mixtures may be done at stations.

The early spring stirring of the soil, which is very desirable to conserve the moisture in the soil, is almost impossible to do in good time with the teams that are kept on the farm by plowing, and the use of the disc machines is found to be more expeditious, at least on some of the ground. The tractors are not yet made so as to be practical. Commercial fertilizers are very good but after extensive trials he found that nitrogenous ones were what did the most good and this element can be obtained the cheapest by growing the legumes as much as possible and supplementing with nitrates to make them and the trees grow more vigorously. Lime is also very beneficial on his land. Marketing the crops is a serious problem and every means that will help to place only the fine grades on the market should be used. Then the consumer must get them laid down cheaply. "Apple Day," October 21st, has been dedicated to the exploitation of this fruit and it has done good. The free distribution in the city schools of good apples on that day and other like demonstrations are helpful in creating an appetite for and knowledge of the fruit. Getting and keeping good laborers is another serious matter and plans should be laid to have the work distributed as much as possible during the entire year, by growing a variety of fruits. Good tenant houses tend to keep good laborers.

"The Grape Industry of the United States" was treated in a most able manner by Mr. G. C. Hasmann, Viticulturist of the U. S. Department of Agriculture. He spoke of the ease with which grapes are grown, their healthfulness, and the lack of the fruit nearly all over the country among the very people who could have plenty of them at home. The manufacture of grape juice or unfermented wine should be greatly increased so that it could be used far more commonly than is at present possible, because of the high prices asked for it. The lowest temperature that will kill the germs that cause fermentation beyond all question is 180° F. but very often lower temperatures will do it, down to 150° F. The flavor is injured by too much heat in sterilizing the juice. No sugar should be added if the best grape flavor is to be preserved.

The grading and packing of fruit came in for a liberal share of attention from several speakers well able to discuss it. Mr. R. G. Phillips of New York, secretary of the International Apple Shippers' Association made the statement with emphasis that the western growers and packers sent almost no low grade fruit to market while those in the east marketed everything they had, no matter how poor. They ruined their own business by doing so and hurt the whole trade in fruits. They have absolutely no restrictions on grades except that they be marked according to what they are and even this mild provision is often violated.

Mr. E. H. Shepard of Hood River, Oregon was not present, but sent a paper that laid much stress on the great value of organization for all fruit growers. They can accomplish in this way what they never could by any other means. It is this that has very largely made fruit growing the success it is in the West, and they have lately united in a general union that covers the entire northwestern regions. The clashes and gluts incident to promiscuous distribution will be eliminated by this means.

"Horticulture in the Mimbres Valley," by W. E. Holt, of New Mexico, gave very encouraging news of the progress of fruit growing in that arid but yet well watered region. He stated that apple growing was quite well established as an industry there when the Pilgrims landed at Plymouth Rock, and it was from there that some of the finest apples ever shown at the great expositions had been grown. Pears, peaches and grapes flourish there remarkably well and are of the highest quality.

Dr. S. W. Fletcher, the director of the Virginia Experiment Station, discussed "Eliminating Unprofitable Trees from an Apple Orchard." He gave facts from his own orchard as a carefully kept record of each of several thousand trees had shown them. A little over 17 per cent. had not been profitable. Of these the woolly aphis had been the chief hindering cause and this had been overcome almost entirely by using tobacco in the ground and sprays above when the insects were there. He had not seen anything to lead him to believe that a bad pedigree had any influence in causing unproductiveness, but that local ailments, poor soil or inattention were chargeable with the failures.

Prof. F. W. Card of Pennsylvania on "Business Adjustments for the Fruit Growers" made it plain that there is great need of diversity in the business and not specializing too much. It distributes the labors and the returns and makes it far less possible to sustain wholesale or entire losses of crops by frosts or any other natural causes.

From the Philippines came a report of the tropical fruits by P. J. Wester the official horticulturist of those islands. He stated that the cocoanut gave the greatest revenue of any product grown there, not excepting sugar and Manila hemp, which once were in the lead as exports. The meat of the nuts is dried and sent to civilized countries, that the oil may be made into soap and used in many other ways. The banana is the chief fruit used as food, of which there are over 100 varieties belonging to five botanical species. Some of them are very small and soft but of the most delicious flavor, while others are very large and hard and are used only when cooked. The papaya is another very common fruit and grows almost without care, as does the guava and mango. But there are only three kinds of mangoes that are really good, except that very lately the Experiment Station has introduced many choice varieties from India and elsewhere, and the effort is being made to induce their propagation by grafting and budding. The culture of citrus fruits is greatly neglected, only the mandarin being given much attention. The pineapple is grown mostly for the fibre of the leaves. However, the American residents are planting the Smooth Cayenne and some other choice varieties in a commercial way with the intention to can the fruit for export. There are a great many other fine fruits growing there, many of them native, but they are treated in the most neglectful manner. "Philippine pomology may be said to be scarcely in its infancy as yet" and the possibilities for a canned export trade and the production of the chocolate bean are almost boundless.

West Indian Pomology was described by Mr. H. C. Henriksen of Cuba and Jamaica in a very intelligent way. He stated that there was little done except to gather and eat what grew almost without care until after the late war with Spain. Since then the people of this country have taken up fruit culture in a business way and have planted extensive orchards of oranges and pomelos and large pineapple fields. The same is true in a measure on the Isle of Pines. In Porto Rico the same is being done even more enthusiastically. The culture of the chocolate bean or cacao might be taken up in earnest but as yet little is done with it for the natural conditions are very favorable. The papaya, guava, avocado, sapodilla, and many other fruits grow well but are little cared for. The improved varieties of the mango are being introduced by American fruit growers. In Jamaica everything in the way of fruit growing is done in a very small way and mainly for local use, although some fruits and cocoanuts are exported.

"Alaska's Pomological Resources" was the subject of a very interesting report from Prof. C. C. Georgeson of Sitka, director of the Experiment Stations of that territory. He told of a native crabapple that is growing quite abundantly in the coast country and the fruit is used by settlers and natives too, to some extent for making jelly. Cultivated crabapples grafted on it as a stock do quite well and in a few places the hardy apples, such as Yellow Transparent. Cherries have been grown in a very small way, but plums, pears and grapes are entire failures. The bush fruits and strawberries do very well. The Cutbert and other red raspberries bear abundantly, but not the black caps or common blackberries. Gooseberries and currants flourish and there are many growing wild that are edible. When I was there a few years ago, Prof. Georgeson showed me a large number of crosses he had made between these native bush fruits and strawberries and some of our best cultivated varieties that looked very promising. The cranberry and several species of blue berries or huckleberries grow and bear fruit in the coast country very abundantly. The interior or Yukon country is a very different region, and what will flourish there in the way of fruits is yet mostly unknown. "Alaska

has little in the way of practical pomology as yet but has great possibilities," is the essence of this report.—H. E. Van Deman.

Answers to Inquiries.

Raising of Flowers.

Prof. Van Deman:—I am thinking of growing flowers for the market in this section and want what information you can give me on the subject. What flowers are most in demand?—M. R. H., Okla.

Reply: The cut flower business is a good one where there is sale for the flowers, but that all depends on so many local circumstances that it would be impossible to give good advice without investigation. If there are rich people living in one or more cities not far away they will buy flowers. Those grown in greenhouses and out of the regular seasons for outdoor flowers will find the best market. Roses, carnations and violets are the most popular.—H. E. V. D.

English Walnuts in New Mexico.

Prof. Van Deman:—We have land located in the lower Pecos valley near Loving, New Mexico, and want to know the possibilities of English walnuts in that section.

This land is located under the Carlsbad irrigation project and can be watered. Can English walnuts be grafted on to native roots or black walnuts?—A. W. H., Okla.

Reply: It is quite likely that the Persian (English) walnut will succeed in the Pecos valley in New Mexico. There is a native walnut growing in some of those western valleys that is one of the best stocks for grafting or budding the Persian walnut on that I have ever seen. I have tested it out quite well. It may be found in the lower Pecos valley. I know it is in some parts of southwestern Texas and Oklahoma and extends to Arizona, but is not a very common tree.—H. E. V. D.

Pear Blight.

Prof. Van Deman:—In the September number of Green's Fruit Grower, in C. A. Green's account of his interview with Mr. Bell, the latter mentions the fact that tender, fast growing shoots on pear trees are more susceptible to blight than slower growing branches; also he says that to avoid a rank growth he cuts back each season's growth during the dormant season. Now my experience has been—and I supposed it was an accepted rule among fruit growers generally—that pruning during the dormant season encourages wood growth. For example, I have a Kieffer pear tree in my yard which the first few years after planting I cut back, each season while dormant, quite severely, probably one-half or two-thirds of the last season's growth, and each season it made a growth of from two to three feet; while after discontinuing the annual pruning, one season's growth was scarcely half that of what it was before. How do you account for the difference—i. e. in my case and in that of Mr. Bell—as to the effect of winter pruning? Now the question is, considering the effect on my trees of this annual pruning as above mentioned, would you advise such treatment? If so, will it tend to keep off the blight? Pear blight is quite prevalent in this section and any information along this line will be greatly appreciated.

2. I am thinking of planting about a dozen Persian walnut trees next spring. I am about sixty miles east and sixty miles north of Indianapolis. Do you think they will succeed here? Several years ago I planted two pecan trees which were labeled Stuart. They have withstood 22 degrees zero F. and are doing finely thus far.

3. Do you consider two-year-old black raspberry plants as good for planting—if not too large—as the tips of one season's growth?—Riverside Fruit Farm, (Adams Co.) Berne, Ind.

Reply: It has always been my belief that cutting back fruit trees during the dormant season tended to stimulate nature to make new growth to replace what was cut away. This will induce blight on pear trees, because the rank, tender shoots will give the germs better chance to enter the vital parts than if they were not so rank. I would want my pear trees to make a fair growth each year and as early in the season as possible and ripen their wood early. If pruned moderately they should bear well and this will prevent excessive growth. I prefer to prune in midsummer.

2. It is doubtful if the trees of Persian walnut will be hardy in northern Indiana, but they might be if the hardiest kinds are planted and those grafted on native walnut stocks. The Pomeroy, Rush and a few others are hardy in New York and Pennsylvania, but the winters are much more trying in northern Indiana. Only a few trees should be planted as a trial.

3. Two-year-old black raspberry plants are all right to set out.—H. E. Van Deman

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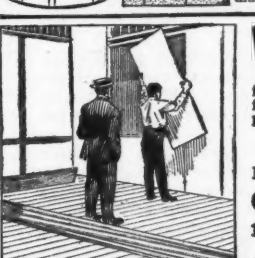


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Suggestions for a Currant Plantation.

You suggest planting every other row to currants among the grape vines. This will be desirable in some respects but remember that grape vines are longer lived than currants. There are many productive grape vines in this country that are 100 years old, but you will find but few currant plantations that are over 12 years old, still currants will continue to bear for a much longer period. The chances are in having every other row currants the sun and air could circulate more freely and cultivation would be somewhat easier. But on the whole I do not advise mixing plantations as you suggest. I would not plant the White Grape currant so largely as the red currants. White currants are desired in market but are not bought so largely or extensively as the red varieties. White Grape is a popular white currant, and Diploma, Red Cross, Perfection and Wilder are the largest and most productive of the red varieties. Plant the currants 3½ feet apart in the row leaving 7 feet between the rows.—C. A. G.

Does It Pay?

It is well for all those in business to frequently ask the question, Does this thing pay? If we are raising poultry, if we have an orchard of peach, pear, plum, cherry or quince; if we have strawberries, raspberries, blackberries, currants, gooseberries, let us in harvesting and disposing of these products have a clear and well defined idea as to whether they are profitable. If we are farmers let us inquire whether the wheat, oats, corn or hay, is yielding us a profit after charging up the rent of the land, the seed, and the expense of the labor bestowed. I am satisfied that there are many things done upon the farm that are not profitable. Sometimes the price received for a farm crop, whether fruit or otherwise, may for certain reasons be remarkably low for a certain year so that when we inquire into the question carefully we will decide that it will not pay to harvest that crop or to attempt to sell it, but that it will be money in our pockets to let it go to waste.

It will seem to many that this is needless advice, but it is not. I know of men who have been conducting a large manufacturing business who did not know that for many years they had been selling their product at an actual loss.

Advancing Prices for Apples.

Our enterprising exchange, Tribune Farmer, in a recent issue published charts showing the course of the prices of different varieties of apples in New York City during the last ten years. These charts indicate that there has been a gradual advance in the price of the apple crop during the past ten years and up to the present date. This will be a surprise to many who have feared that the apple market would be over supplied. These fears have been entertained as far back as I can remember.

Thirty years ago one of the principal topics of the horticultural conventions was that of the prospect of a surplus of apples. The fact probably is that this country will never be over supplied with good quality of apples. If there was a certainty that every apple tree planted would be well cared for, and would prove productive throughout all the years of its long life, then there might be some fears of the over production of apples. But when we consider the fact, which is that the apple which is carefully planted and well cared for through its existence is a notable exception, then it is that we realize that there will never be a glutted market of first class apples, for any continuous time in this fruitful country.

Waiting For Fruit.

I am a frequent visitor at the art galleries and find on many occasions interesting portraits in which the artist has attempted to express the feeling and sentiment of waiting, through his brush on the canvas. Most mortals are waiting for something. It may be a young girl waiting for her lover, a mother waiting for her absent child, the wife waiting for her sailor husband after a storm at sea, or the husband waiting for the wife who has fled from his home forever. Some of us are waiting for death and longing for death; others are waiting and hoping for the days of prosperity which have never smiled upon them. The fruit

grower is waiting for his orchards to come into bearing.

I can never forget my early experiences at Green's Fruit Farm. The southerly windows of my sleeping room looked out upon the field which I had planted to apple trees with peach trees interspersed as fillers. The soil was fertile and these trees were thriving amazingly. Each morning the moment I arose I went to the window to look over this promising orchard in which I took such delight. While I could not see much change from day to day, in imagination at least I pictured each tree a little more conspicuous each day as the months rolled by, but the trees grew faster when we did not watch them. The old saying is that "A watched pot never boils" therefore when I left the fruit farm in the hands of my superintendent, the trees came on as though touched by the wand of an Aladdin and for years they have been bearing attractive crops of fine fruit.



Apple Hedge Row at Green's Fruit Farm.

Notice that our fruit hedge rows are not confined to dwarf pears. The above illustration is from a photograph taken of a row of apple trees. The trees are planted 6 to 8 feet apart in the row. Notice that these hedge rows have plenty of sunshine and fresh air on both sides, hence they remain in fruit, and fruit abundantly even after the trees have attained large size. These trees in the photograph are filled with fruit but the camera did not show the fruit plainly. On this other row of apple trees there may be 50 varieties of apples. We have in all over 100 different varieties of apples in bearing at Green's Fruit Farm. Bear in mind that no orchard of any kind of fruits can succeed where trees are so crowded in on all sides as to prevent the free admission of sunshine and fresh air. But where the trees are full exposed on two sides they can be planted closer together as shown in the above illustration.

Sweet Apple Days.

Is the sweet apple going out of fashion? If so it is a national calamity. There is a place for sweet apples on every village or farm home. What is more delicious or wholesome than baked sweet apples? If you are feeding apples to your horses, cows, pigs or poultry, none are so valuable as the sweet apple. I claim that the sweet apple contains more nourishment than the sour apple. There are people who cannot eat sour apples, thus for them the sweet apple is indispensable.

Since we have prevailed upon you to plant a few sweet apple trees you naturally ask, What kind of sweet apples shall we plant? The first variety that comes to my mind is the Sweet Bough, which is an early apple, ripening about harvest time. I can never forget the Sweet Bough tree that grew in my father's orchard on the homestead farm a few miles south of Rochester. It was ever loaded with the most beautiful specimens, perfect in those days, without worm hole or blemish, each apple looking like a globe of gold. The Jersey Sweet is a delightful apple streaked with red and of moderate size. Bailey Sweet is a large and rare apple of high quality. Then comes the Pound Sweet, which carries me back again to early days. This is the largest apple I have mentioned and one of the most valuable of all sweet apples in my opinion. It is bright yellow in color. Sometimes it has a water core, which does not interfere with its keeping or its quality.

There are people who will use no cider that is not made of sweet apples. Sweet apples ought to make better vinegar than sour apples. Apple butter and dried apples pave the way for sweet apples.

I have almost forgotten to speak of the Sweet Spitzenburg, a few trees of which we have at Green's Fruit Farm. This

is the longest keeper of all the sweet apples I have mentioned. It is a reddish apple of fairly good size and an abundant bearer.

Increasing Interest Taken in Nut Culture.

It is not surprising that the people of the United States should feel a deep and growing interest in nut growing, owing to the fact that at the present time this country is supplied with nuts more largely from foreign countries than from our own nut groves. I have not the exact figures but as near as I can recall we import many million dollars worth of nuts.

Until of recent date nuts have been regarded as a luxury. In recent years our views have changed and we have become more enlightened and now look upon nuts as wholesome and almost necessary foods. Nuts furnish about the same constituents as meat, but nuts are free from the poison which is always present in a smaller or larger degree in meats.

I have noticed in France large Persian walnut trees, known here as the English walnut, which attain a size of some of the largest forest trees and bear fruit abundantly. It is not unusual for a tree of these walnuts to yield eight bushels of nuts in one season. I am surprised to hear that in France these nuts are sold by the producer at 7 cents per pound. Yesterday I paid 25 cents per pound for some of the imported walnuts. A friend of mine who has a walnut grove near Rochester, N. Y. sold his crop for the last two years at 17 cents per pound wholesale.

Planning a Plantation of Grape Vines and Currant Bushes.

A subscriber at Providence, R. I., asks for information on the above subjects. He plans to have separate tracts of one acre each and to have wide gaps between certain rows thinking these gaps will be desirable as roadways in gathering grapes. I see no advantage in separating the vineyard in different plots. In the grape growing district I see ten to twenty acres of vines without roadways between them; the fruit being gathered from either end of the vineyard.

Grape growing possibly has not been as profitable as the growing of currants and other small fruits, but there are many who will differ with me on this point. Certainly a vast amount of grapes can be grown upon one acre. I have a vine of the Worden trailing over my porch which yields several bushels of grapes every year. I do not mention this to indicate that vines in the vineyard can be made to yield as much as this vine climbing over my porch. I am impressed with the thought that grape growing will be more profitable in the future than in the past for the reason that in large grape growing districts of New York state, the root worm has been doing serious injury. This root worm is not prevalent in other sections. We do not have it at all at Green's fruit farm. The grape crop of New York state this year is light, but the prices were so much higher than usual that grape growers have made more than the usual profit on their vineyards.

Select a hill top or hillside facing the south for a vineyard. The nature of the soil is not so important, though I would not select a stiff clay soil. Grapes succeed on sandy soil, loam soil or best of all on a shaley land such as prevails in the famous Chautauqua grape belt along the shores of Lake Erie. The soil need not be exceedingly rich. Almost any soil that will produce good corn, wheat, etc., will produce grapes if the location and climate are suitable.

Do not plant the rows too closely together, not less than 8 or 10 feet, leaving plenty of room between the rows for a team to pass up and down with a two-horse cultivator. Leave room at the ends of the rows for turning around, if turning is necessary. Wagons are made specially for short turning in vineyards.

The grape vineyard varieties of grapes for this state are Moore's Early, Worden, Concord, Niagara and Delaware, the latter being a very slow grower not producing so much bulky fruit as the others named.

If the vines are planted 12 feet apart each way, 303 vines will be required for each acre; 10 feet apart each way 435 vines; 8 feet apart each way 680 vines. I would suggest planting the vines 8 feet apart in the row and the rows to be 10 feet apart.

Newest Notes of Science.

To prevent waste of current a new switch for electric lights in seldom used places is combined with a buzzer, which sounds while a light is burning, reminding its user to turn it off again when he is through with it.

Such beneficial results have been attained by sufferers from some diseases by spending several hours a day in air saturated with radium emanations that a sanitarium for giving such treatment has been established in Vienna.

While the average amount of water used daily in the cities of the United States varies from 50 to 150 gallons per capita, there is an almost uniform consumption of a little more than half a gallon by each person for drinking purposes.

So successful a machine for war purposes has the aeroplane proven that the French army has attached expert machinists to its aerial corps and has equipped a huge motor truck as a complete machine shop for making repairs in the field.

In the first quarter of this year the birth rate of England and Wales fell to the lowest figure ever recorded, 23.8 per thousand of population, the rate for the entire United Kingdom being only 23.9.

Apart from signaling, the distance at which objects can be discerned by the eye depends on two things—their height and the clearness of the air. The most conspicuous object in the British Isles is Mount Snowdon, in Wales, which on a clear day can be distinctly seen from Gray Head, County Wicklow, a distance of no less than eighty-five miles. Snowdon can also be seen from Waterloo, Liverpool, a distance of fifty-two miles.

In Mexico the air is said to be clearer than anywhere else in the world. At any rate, it is the only country where a view extending to 200 miles can be obtained. By climbing to the top of the Sierra mountains the lonely peak of Mount Sparta can be seen. It would take four hours by express train to reach it.—Philadelphia Ledger.

Grape Vine

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Sweet and Sour Apples.

Editor of Green's Fruit Grower:—About one year ago you had a very interesting article in The Fruit Grower, in regard to an apple that was part sweet and part sour, speaking of this as "a myth." It is my pleasure today, to send to you by Parcel Post, a few of this variety. The reason why you did not get them last year, was that there were none on the tree. While the flavor is not as marked now as it used to be, for the tree is practically gone, you will doubtless find a difference in different parts of the apple.

This tree is on a neighbor's property; part of the fruit falls on my land, and ten years ago you could easily see by looking at the fruit, which was sweet and which was sour.

There was an incident a number of years ago that would perhaps not come in amiss at this time, so if you will pardon my taking your time, I will give it to you. A new minister came to this place and in his sermon made the remark:—"Friends, this would be as impossible, as for an apple to be part sweet and part sour." The next day the lady who owned the tree sent the minister a basket of the apples, and next Sunday he had to take back the statement in the pulpit.

The other day I was talking with an elderly man who is quite a fruit grower; he told me that the way it was done was to split the scions, bud and all, and while it was very hard to make them grow, he had known of its being done with success.

There is also a marked difference in the fruit different years, some years the difference in flavor is very marked while others it is not as much so. Trusting that I may see a good many more articles from your pen and wishing you much deserved success.—Lucien E. Rouse, Conn.

song and laughter of men and maidens as they pick and pack the luscious fruit, and you will experience that delectable beneficence that lingers in the memory for a lifetime and makes one realize that time is nil and advancing years are but a dream. I extend to you, dear friend, these vitalizing vibrations right hot off my pulso-graph.—Prosperity, Peace, Health, Happiness, Longevity.

Most sincerely yours,
F. H. LaBlume, Agrl. & Indl. Agt.

A Young Man and a Northern Spy Orchard.

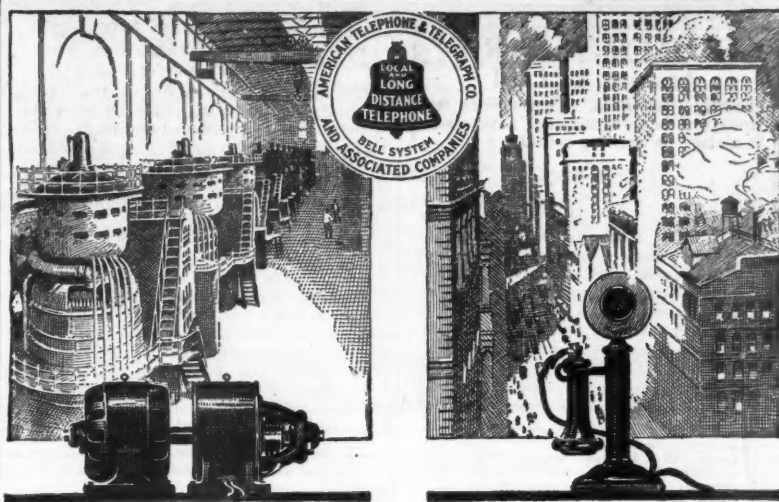
Written for Green's Fruit Grower by
John E. Taylor, Maine.



There is a young man in Oxford County, Maine, that after trying a business career and being ordinarily successful in that, decided that farming

should be his vocation for the future and the first thing that he did was to decide upon a specialty and this was orcharding. This was about seven years ago. The farm now has a good Northern Spy orchard of an acre and a Baldwin orchard of three acres. This young man favored the Northern Spy, and he decided to become a Spy specialist. A large number of apple trees are scattered about the farm of 140 acres. He has now about 2,000 trees, but he plans to make the Spy the queen of the farm.

In starting out his farming he began to cultivate the ground in his orchard as one would cultivate his corn. He scraped the trees and sprayed and sprayed. He used fertilizer generously. The first year's crop demonstrated that he had



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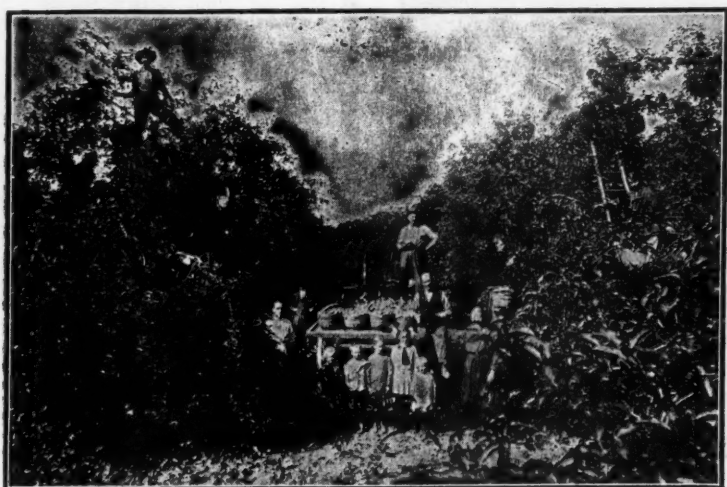
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Picking Rome Beauty apples at the fruit farm of Geo. I. Burton, Ind.

Apples in Indiana.

Editor Green's Fruit Grower:—I have been a subscriber to your best of all fruit papers for about twenty years. I suggest that you add the word "Guide" to the name of your paper because that is what it is to the fruit grower.

I am growing most all kinds of fruit, but apples and strawberries are my favorites for pleasure as well as profit. I am sending you a photograph of our workers picking Rome Beauty apples. We had the finest lot of this grand old variety this season that I ever saw. They are about 95 per cent. perfect. The apple crop in southern Indiana has not been more than a fifth of a full crop this year and the quality inferior. We have been very successful this season both in quality and quantity. The reason is that we did the right things at the right time and in the right way. This is the key to success in any business, but especially so in apple growing. I should like to go into details but fear my letter would be too long.—Geo. I. Burton, Indiana.

Editor's Note: I am always glad to give details of success or failure in fruit growing.

A Box of Virginia Apples.

Roanoke, Va., Oct. 30th, 1913.
Capt. J. F. Merry, Manchester, Iowa:—I am sending you today a box of our Extra Fancy Virginia Albemarle Pippins, at the request of our mutual friend Mr. J. F. Jackson, Agr'l. Agent of The Central Of Georgia Railroad.

These are the self-same type of golden apples from which was distilled the fabled "Nectar of the Gods."—Merely to look at them, will make your eyeballs jingle in ecstasy, and upon eating them your spirit will immediately ascend into the blue empyrean and on looking down you will see the sunshine and the shadow chasing themselves across the billowy fields of golden grain and filtering through the emerald canopies of our Virginia orchards that crown a thousand hills. You will hear that glorious music, the

done right and the neighbors are now following his example. He has increased the size of the crop and the quality. His apples competed with the famous orchards of the Northwest.

This man does not use stable manure for his orchard and he believes that in that way he avoids considerable scab and other diseases. He uses a good quality of commercial fertilizer, using a slow acting blood nitrogen instead of nitrate of soda. He uses lime-sulphur spray and his apples are free from worms, this being contributed entirely to this work.

It has been stated on good authority that an apple tree when ten years old and thereafter is as good as \$100 in a bank at interest each year. This shows the advantage of caring for the scattered trees on a farm. This man has given the scattered trees on the farm some radical treatment. He has cut them back as near to the trunk as they will stand and put in grafts from his standard orchard. He has not done this all in one year but takes a few at a time each year. He plans by doing this that he will have a producing orchard much quicker than by setting out a new orchard.

This man started in with his farming with little capital but with a lot of ambition and willingness to work. In addition to the apples, he is raising small fruits such as the red raspberries. In one year he picked 400 quarts from his patch which netted him 24 cents per quart.

Care of English Walnut.

R. E. Negus of Iowa, has secured a small tree of the English walnut from the nut sent her through Green's Fruit Grower, and is desirous to learn how to protect it through the coming winter.

Reply: The little tree can be banked up to its full height with earth. This is the way I protect my half hardy rose bushes. I bank up over the roots and around the branches about 12 to 18 inches in height. When growth should begin early in spring the soil should be removed.

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Ask your dealer for Genasco. Mineral or smooth surface. Look for the hemisphere trademark.

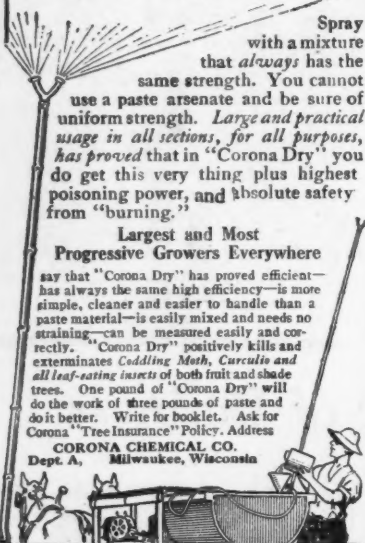
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Eliminates guesswork. Standardizes the strength of the spray mixture. Saves work in mixing—no straining needed.



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say that "Corona Dry" has proved efficient—has always the same high efficiency—is more simple, cleaner and easier to handle than a paste material—is easily mixed and needs no straining—can be measured easily and correctly. "Corona Dry" positively kills and exterminates Codling Moth, Curculio and all leaf-eating insects of both fruit and shade trees. One pound of "Corona Dry" will do the work of three pounds of paste and do it better. Write for booklet. Ask for Corona "Tree Insurance" Policy. Address
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Don't judge Edwards Steel Shingles by common galvanized roofing—which always rusts. We have invented a method that absolutely prevents rust from getting a foothold, as 125,000 delighted owners of Edwards Roofs have found. It's the famous Edwards Tightcote Process.

No painting, no extras, no tools, no expert workmen needed. Hired man can do it with hammer and nails, in "jig time." Put 'em on right over old roof or on sheathing. Outlast four ordinary roofs. No dealer's profit to pay. Sold direct from factory to user. And we now pay the freight!

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Rush a letter or postal to us tonight. Give size of roof if you can. If you can't, simply send us the coupon below. Our Special Price Offer, Roof Book 154, will come "a-flying"—by return mail.

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Please send Book on your Steel Shingles, together with latest Freight-Paid prices.

Name _____
Address _____

The Orchard Site.

Written for Green's Fruit Grower by
M. Roberts Conover, N. J.

The favored orchard site is the sloping or knolly fertile tract, although there can be no objection to a level fertile site well-drained as to surface and subsoil and open on at least two sides to give free passage of air currents, for the vulnerable parts of a tree with regard to climatic and atmospheric conditions are the roots, buds and tender branches.

The health and endurance of the roots depend upon good drainage. Ground that is low or springy holding water about the roots during part of the fall or winter will prove fatal to some of the trees if not to the greater number of them. The absorbing power of the numerous rootlets is in abeyance. When the leaves are off the trees and though these rootlets have hardened somewhat they cannot with-

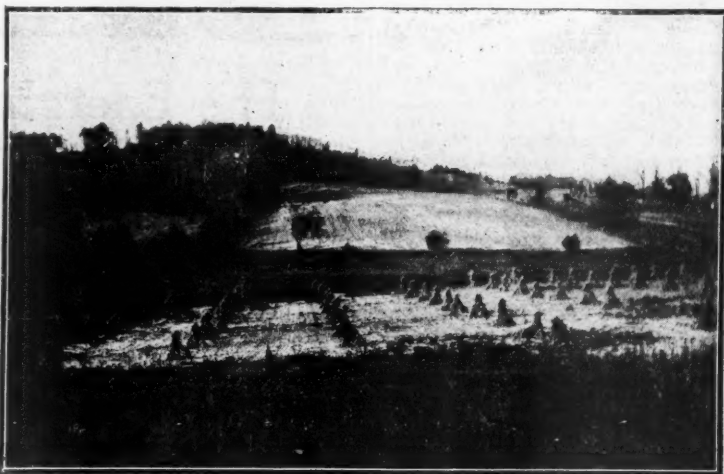
field sloping from the brow of the hill is an ideal orchard site as to land and air drainage. Air currents draw across the lower lands which offer no menace to an orchard in such a location.

What plant we in this apple-tree?
Sweets for a hundred flowering springs,
To load the May-wind's restless wings,
When from the orchard-row, he pours
Its fragrance through the open doors:
A world of blossoms for the bee.

—Bryant.

Rochester Leads in Peach Shipments.

With 373 cars shipped, Rochester took second place as a peach shipping point on the New York Central this fall, and the New York Central hauls more peaches than all of the other railroads in western New York combined and multiplied by ten, railroad men say. Barker, on the R. W. & O., led with 447 cars, and Webster, Union Hill and Seneca Falls tied



A hill side or a hill top of the above farm as shown on the photograph are good sites for an apple or peach orchard. The low land in the foreground occupied by shocks of corn are not as desirable for the planting of any kind of an orchard as are the more elevated sites.

stand decay in ground soggy enough to exclude the air. Spring finds such trees without sufficiently sound root areas to send forth new roots to meet the demand of the tree, hence it dies.

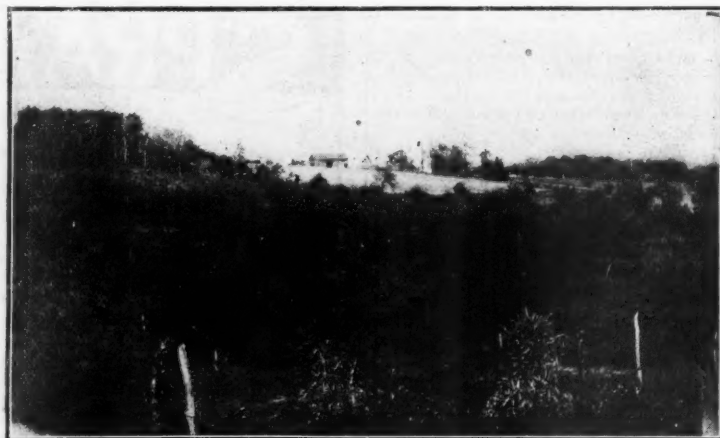
This condition may occur on land with hard clayey subsoil which tends to hold water in the region of the roots. The only safe method is the use of a subsoiling plow in preparing the soil and close observation of the action of water upon the land.

The damage to buds and blossoms by spring frosts is increased by insufficient air drainage. This condition may prevail on high as well as low ground if the site is basined about by hills and woods.

as tail enders with one car each. Considerably more than 4,000 cars of peaches were shipped, says Post Express.

The shipments from eastern New York points this year were 817 cars in excess of last year. Rochester showed an increase of only 11 cars over 1912, while Barker's increase was 226, or more than 100 per cent. Brockport shipped only eight cars this year, compared with 105 last year, and Holley shipped only eight, as against 100 last year. Spencerport and other stations also showed a large decrease.

Until this year Greater New York has always been the largest single consumer of peaches from western New York, but



This thrifty orchard is planted on a slope considerably higher than the lowland adjoining. It would probably make a profitable orchard but I would have preferred to have located it on a still higher elevation.

Prevention lies in the choice of land above those in which the cold air lies undisturbed by a breeze. It is easy to determine the areas of poor air drainage by noting the position of vapor masses on damp still mornings.

The damage to twigs and branches by sun-scald, due to the quickening of the tree in mild winter weather followed by severe freezes, will be less with susceptible varieties if the chosen site is not a warm southern exposure.

Illustration One shows a valley. An apple orchard appears in the distance at the right. At the left of this beyond the cornfield is a peach orchard on the margin of a marsh. The apple orchard and a woods shut off air currents on one side as do the hills on the other sides leaving the orchard at the mercy of the frosty chill of cold nights in spring.

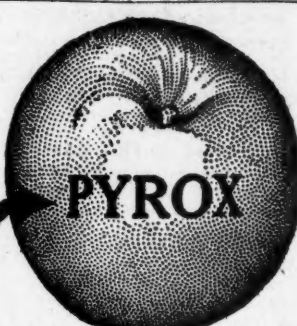
Illustration Two shows an apple orchard better located. It lies on a small slightly undulating plain below a hill with lower land areas on two sides. It is frost proof except under extreme conditions. A

this year smoky Pittsburgh extended its hand, clutched and secured the crown, with 688 carloads, or 119 more than Greater New York. Ohio cities took a large quantity, Columbus leading with 85 cars, and Cleveland a close second with 75. Chicago, with a previous high record of five cars, registered last year, took 46 cars.

Some of the shipments from nearby villages and cities were as follows: Hilton, 228; Morton, 218; Albion, 137; Hamlin, 96; Sodus, 55; Middleport, 48; Ontario, 44; Barnard, 41; Brighton, 26; East Williamson, 24; Charlotte, 17; Geneva, 8; Adams Basin, 5; Greece, 5; Wolcott, 4.

We must be as careful to keep friends as to make them. The affections should not be mere "tents of a night." Friendship gives no privilege to make ourselves disagreeable.—Lubbock.

The coldest weather does not kill the insects. Therefore spraying is the safest method of killing them.



Better Fruit

SPRAY WITH PYROX

NO WORMS. Pyrox kills all leaf-eating insects, codling moth, canker worm and kindred pests.

NO SPOTS. Pyrox prevents or destroys fungous growths, scab, blight, rot, etc., thus producing beautiful,

PRIZE QUALITY fruit. Leading fruit growers and exhibitors like Hardy of N. H., Repp Bros., also Barclay, of N. J., Tyson of Penn., have used Pyrox for years. You know their record. Pyrox is **THE ONE BEST spray**; smooth, creamy, free from lumps, mixes easily in cold water, doesn't clog the nozzles. It sticks to foliage even through heavy rains, remaining effective for months, thus saving expense of respraying. All ready to use by adding water.

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Thoughts for the New Year.

No one is useless in this world who lightens the burden of it to someone else. How soon a smile of God can change the world—how we are made for happiness—how work grows play, adversity, a winning fight.—Robert Browning.

Oh, do not pray for easy lives—pray to be stronger men. Do not pray for tasks equal to your powers—pray for powers equal to your tasks. Then the doing of your work shall be no miracle but you shall be a miracle. Every day you shall wonder at yourself and at the richness of life which has come to you by the grace of God.—Phillips Brooks.

I resolved that, like the sun, so long as my day lasted, I would look on the bright side of everything.

Some men move through life as a band of music moves down the street, flinging out pleasure on every side through the air, to everyone far and near that can listen.—Henry Ward Beecher.

The best definition of "a friend" is, "The first person who comes in when the whole world has gone out."

Half the world is on the wrong scent in the pursuit of happiness. They think it consists in having and getting, and in being served by others. It consists in giving and serving others.—Henry Drummond.

I shall pass through this world but once. Any good thing, therefore, that I can do, or any kindness that I can show to any human being, let me do it now. Let me not defer it or neglect it, for I shall not pass this way again.—A. B. Hegman.

The pleasantest things in the world are pleasant thoughts, and the great art in life is to have as many of them as possible.—Bovee.

If you have a friend worth loving, Love him. Yes, and let him know That you love him, ere life's evening Tinge his brow with sunset glow.

Are you happy now? Are you likely to remain so till this evening, or next month, or next year? Then why destroy present happiness by a distant misery which may never come at all? Every substantial grief has twenty shadows, and most of them shadows of your own making.—Sydney Smith.

When true friends meet in adverse hour, 'Tis like a sunbeam through a shower, A watery ray an instant seen, The darkly closing clouds between.—Sir Walter Scott.

It is not written, blessed is he that feedeth the poor, but he that considereth the poor. A little thought and a little kindness are often worth more than a great deal of money.—Ruskin.

Let us beware of losing our enthusiasm. Let us ever glory in something, and strive to attain our admiration for all that would ennoble, and our interest in all that would enrich and beautify our life.—Phillips Brooks.

Let us have faith that right makes might, and in that faith let us to the end dare to do our duty as we understand it.—Abraham Lincoln.

So may the New Year be a happy one to you—happy to many more whose happiness depends on you. So may each year be happier than the last.—Charles Dickens.

Elberta peaches from California and Washington have been selling on the English market from 72 to 78 cents per box, containing 64 to 72 fruits.

After the Newton Pippin the Wealthy is said to be the most popular apple on the British market. After it comes the Russet and then the Spy. The best selling late variety is the Stark. It always arrives in good condition and meets with a ready sale. After February, the market for Ben Davis is good and they should not be shipped before that time.

Prices of Apples.

Mr. C. A. Green:—Your correspondent (page 8, December, 1913.) has a poor appreciation for good apples when he expects to get them and a barrel, for \$2.00 or \$3.00. The barrel costs 35 cents, packing 15 cents and hauling to train 10 cents, making 60 cents expenses, leaving \$1.90 to \$2.40 for the apples, or 60 to 80 cents a bushel. I am getting from \$1.00 to \$1.50 a bushel for my apples in New Castle, Pa., so it is not likely I will send Mr. Thatford any apples.

I have carloads of apples for sale. I am a Green's Fruit Grower subscriber. J. C. M. Johnston, New Wilmington, Pa. Baldwin, Spy, Greening, King, Ben Davis.

The Delicious Apple in the East.

It has been over thirty years since there came up a little seedling apple tree by chance in central Iowa on the premises of Mr. Jesse Hiatt, one of the veteran horticulturists of Iowa, now deceased, and it flourished so well in that cold climate that he let it grow. When it came to bear the fruit was so handsome and of such good quality that he had others try it and they agreed with him.

Then it was taken to the fruit shows and finally came to the notice of the Stark Bros. of Missouri, who in 1895 bought the sole rights to propagate the variety in their nursery. Since then the young trees have been planted by the million in all the apple growing sections of this country and foreign lands as well. There is not a place where I have seen it growing nor have I heard of one where the Delicious is not liked. The trees bear early and abundantly and the fruit meets with favor at home and in the markets. No apple brings better prices and few kinds as much. More of it has been produced in the far western states so far than this side of the Rocky Mountains, because fruit trees come into bearing there earlier, but there has been no trouble about those bearing in the east that have been old enough. And the fruit that I have seen has been very highly colored and of the best flavor of any of the variety that I have tasted so far, although the size was not so large as those from the west. I fully believe that there is no question about the tree value of Delicious for eastern planting.

The fruit is of full medium size or a little above it, very beautifully colored with suffused and striped red over a yellow under-color. The shape is conical and often much wrinkled or puckered at the apex, which is in some cases rather an objection. The flavor is very mild sub-acid and truly delicious, being very aromatic and pleasant to the taste. More growers ought to plant the trees so that there would be more of the apples for home use and plenty to sell.—H. E. Van Deman.

The Fifty-Ninth Meeting of Western New York Horticultural Society, January 28, 29, 30 and 31.

Program.

Prof. S. A. Beach, of Iowa State College of Agriculture, will speak on "The General Outlook for the Apple Industry."

Calvin J. Huson, State Commissioner of Agriculture, subject, "The Fruit Industry of New York."

Professor U. P. Hedrick, will speak on, "The Outgo and Income of a Ten Acre Orchard."

Dr. Jacob G. Lipman, Director of New Jersey Experiment Station, "Soil Fertility that must be Answered by the Fruit Grower."

Dr. Reddick, will give a report on, "Troublesome Diseases of the Past Season" also "Apple Dusting Experiments."

George Friday, a well known Michigan peach grower will give a live talk on the subject of "Peaches."

W. S. Teator, of Upper Red Hook, of Blue Ribbon apple fame, on "Growing and Handling of Fine Apples."

Professor Parrott, will give an attractive and instructive talk on "The Season's Results in Spraying."

At this time he will discuss the orchard leaf-roller, give suggestions as to the choice of spraying mixtures for 1914, and deal with the much talked of subject of the parasitism of the San Jose scale and the practicability of introducing the parasites into New York.

George T. Powell, of Ghent, N. Y., will discuss, "On what practical basis may communities, fruit growers and farmers co-operate, and, through parcel post and otherwise, reach the consumers with less cost in marketing?"

Dean Hugh Baker, New York State College of Forestry of Syracuse, subject, "The Reforestation of the Genesee Valley."

"Improved Grading, Packing and Marketing" will be explained by Seth J. T. Bush of Rochester, and Dr. James A. Bissel, of the New York State College of Agriculture, Ithaca, will speak on "New Nitrogen Fertilizers."

Dr. W. H. Jordan, who has spent several months in European travel, will discuss "European Contributions to Agricultural Progress." Other speakers will be Roland B. Woodward, Secretary of Rochester Chamber of Commerce, and Lewis A. Toan also of Rochester.

There will be a fine stereopticon exhibit "A walk through the Genesee Valley Orchard" by Samuel Fraser of Genesee.

The Barry gold medal will go to James A. Morgan of Scottsville, for a new strawberry originated by him. A sterling silver cup and more than \$300 in cash premiums will be distributed for apples in boxes and barrels, pears and apples on single plates, and grapes, vegetables, canned fruits and jellies of any kind made by the wives or daughters of members.

Guinea fowls are the most persistent bug eaters of all the poultry tribe. And they are good eating too—the guineas.

Oils distilled from the needles of spruce and fir trees are being used to scent petroleum floor oils which are sometimes objectionable on account of their odor.

If you must brag a good deal, be a press agent and get paid for it.

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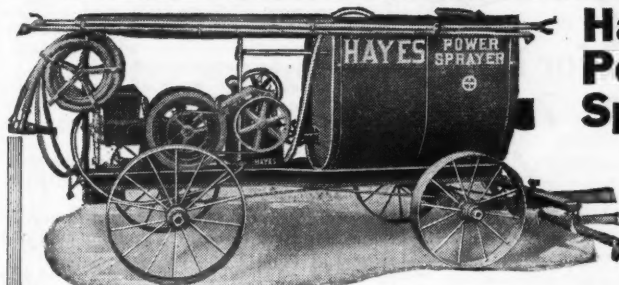
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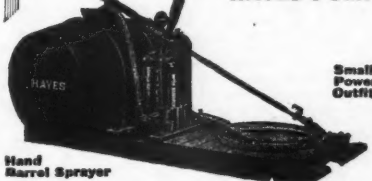
HIGH PRESSURE spraying produces a better quality and larger quantity of salable fruit. The HAYES is guaranteed to maintain 300 lbs. pressure. It thoroughly covers every particle of foliage with a penetrating fog-like mist, insures results and saves solution.

HAYES large capacity, high pressure triplex pump, special design engine and improved agitator are built for high pressure work. Strong, steel frame, cross braced and hot riveted. All steel, non-slip-over, cross ranch orchard truck that turns in 14 ft. Cannot strike trees in turning. Large capacity, light weight, light draft. The HAYES is sure, reliable and easy in operation and guaranteed in efficiency.

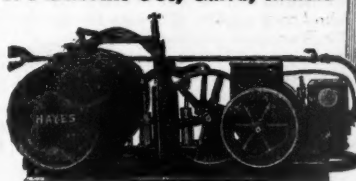
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WRITE! Send postal for FREE book 37 on High Pressure Spraying and complete catalog of HAYES Sprayers. HAYES PUMP & PLANTER CO., Galva, Illinois



Small Power Outfit



Hand Barrel Sprayer

The Right Kind of Sprayer

Means the one that just fits your purpose. You need to consider capacity, pump, engine, pressure, mixing, straining sediment, stability on hillsides, using your own wagon, engine or sprayer with balance of the outfit to fit what you already have. Get the right sprayer for your work and you won't have any cause to be dissatisfied. We show here but three of the 70

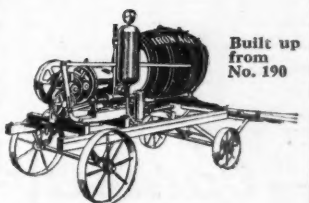


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They are built up in units so that you can buy what you need now and add to the outfit later if necessary. All have the best pumps in use on any sprayers—least slippage among eight of the best in a disinterested test. Solutions touch only brass or galvanized parts. Hemp packing, bronze ball valves, both easy to get at. Pumps outside. Power Sprayers are 50, 100, 150 or 250 gallons capacity. 200 pounds pressure with 6 or 8 nozzles.



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50 gallon Power Sprayer

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Burpee's Annual for 1914

which is now being mailed at the rate of more than ten thousand copies every day, is a Bright New Book of 182 pages and is known as the "Silent Salesman" of the world's largest Mail-order Seed trade. It tells the plain truth about

Burpee - Quality Seeds that Grow

With hundreds of illustrations from photographs and carefully written descriptions of Vegetable and Flower Seeds, it is a safe guide to Success in the garden and should be consulted by every one who plants seeds either for pleasure or profit. We are pleased to mail it free to every one who has a garden and asks for it. Shall we mail you a copy? If so, kindly mention "Green's Fruit Grower" and write to-day.

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FARM DEPARTMENT



Some Hints About Horseshoeing and Broken Knees.

Written for Green's Fruit Grower by
F. H. Sweet, Va.

The average growth of the hoof is about one-third of an inch a month. Hind hoofs grow faster than fore hoofs, and the shoe somewhat retards the growth. Lack of exercise, dryness of the horn and excessive length retard the growth also.

At the toe of the average normal hoof the horn grows from the coronet to the ground in about twelve months, at the sides in from six to eight months, and at the heel from three to five months.

Knowledge of these facts enable us to estimate the probable time required for the disappearance of such defects as sand-cracks, quarter-cracks and clefts.

In shoeing, the wear of the old shoe should be carefully noted to enable the farrier to level the hoof. This done, the hoof sets evenly on the ground.

In case of founder the grounding wear is more pronounced at the heel than in the sound horse.

Where the old shoe is worn thinner on one side than the other, the hoof had not been properly leveled before shoeing.

The bars should never be pared on the sides. The frog should not be touched. If it be too dry and hard and very prominent, it should be softened by moisture in some form and allowed to wear down instead of being pared. The sharp, lower border of the wall should be rounded with a rasp to prevent its being bent outward and broken away.

The branches of the sole in the angle between the bars and the wall of the

shoeing, it has been atrophied; it gives to the hoof an increased surface of support, and relieves one or both quarters of undue pressure that may have induced inflammation and soreness.

The bar should equal the average width of the remainder of the shoe, and should press but slightly on the branches of the frog. The addition of a leather sole, with tar and oakum sole-packing, causes the distribution of the weight of the body over the entire ground surface of the hoof.

An Authority on English Walnuts.

Green's Fruit Grower:—Replying to your letter of the 3d inst. in regard to the statement of your friend, Mr. Krahn of Watonga, Okla., concerning the hardness of the Persian walnut as grown in Italy, I will say that I hardly think the Persian walnut will stand a temperature of 46 degrees below zero in any section of the country. In 1848 I imported trees of the Persian walnut from Scotland and planted them on my grounds in Lee County, Iowa. This is the southern limit of the state. They grew well the first year, but killed down the first winter. They would sprout up again in the spring, but continued to be killed to the ground every winter. We never had the temperature there lower than 20 degrees minus. I am aware that the Persian walnut is grown in Western New York, and has proved quite a success in that section, but I consider it largely due to the modifying influence of the large body of water which is on the northwest of that section. My brother has grown them for a great many years at his home at Winchester, Mass., which is only about

This illustration, kindly loaned

us by the International Harvester

Company, reminds the editor of

Green's Fruit Grower of his experience

in plowing a new farm

purchased within the past year,

which is located near Green's other

fruit farms. While the soil on this

new farm is remarkably and particularly

well adapted to fruit growing, the plowman on certain

fields occasionally runs foul of something

buried in the soil which causes him great inconvenience.

These derelicts in the soil are not blocks of gold or silver, nor are they

meteorites that have fallen from the sky. They are simply boulders

brought down from Alaska or Labrador in the ice age. You

will find such obstructions occasionally on almost all of our fertile eastern farms.

The more progressive farmers have removed these obstructions. That the previous owner of this farm did not dig up and blast these rocks indicates

that he was not acting wisely. The previous owner probably broke many farms in attempting to cultivate this soil without removing the rocks. He lived upon the farm about fifteen years. Think of his discomfort and the risk of life and limb of the plowmen in allowing these rocks to remain. Surely they must be removed some time by somebody, therefore putting off the work of blasting the rocks was simply shifting the burden. Ten dollars would have cleared a 20-acre field of rocks.

Do not consider from what I have said that this new farm is a rocky farm, for it is not. In this respect it is about the same as the homestead farm on which I was born, which is a desirable farm in every respect, and yet there were some rocks on that farm which it was necessary to remove. We have found the removal of rocks on the new farm not expensive nor laborious. All that was necessary was a few sticks of dynamite. As I understand it, dynamite was simply placed on the surface of the rocks and exploded. The pressure of the dynamite being downward instead of upward our rocks were broken to fragments and easily removed. Get an experienced man to handle your dynamite.

quarters should be left a little lower than the wall, so as not to be pressed upon by the inner web of the shoe. "Corns," which in reality are bruises, are the result of leaving dry, unyielding horn at this point.

In the "forger," or horse that overreaches, low heel-calks on the fore feet quicken the action of the fore feet, while the calks on the hind shoe slow the action of the hind feet and prevent injury to the fore heels by the toe of the hind shoe.

The toes of the hind feet should be shortened in "forger" for obvious reasons. Toe weights (more metal in the toe) increase the length of the stride of the fore feet.

Rubber pads are now extensively used in cities and wherever macadam roads prevail. They are rather expensive, but are quite efficient in preventing slipping on smooth pavements, though not so effective on ice. Of rubber shoes there are many kinds. The best are stitched and cemented to a leather sole and fastened to the hoof by nails of a three-quarter shoe. Such a pad will last as long as two shoes. They may be used continuously not only without injury to the hoof but to its benefit. The popular belief that rubber "draws the feet," while perhaps true of the human foot, finds no basis for analogy in the hoof of the horse.

Where rubber pads are used, tarred oakum is commonly placed between the sole and the pad. This substance must be carefully inspected, lest gas-house tar be used instead of what is known as North Carolina tar, as the former has been found to be injurious to the hoof.

The rubber pad diminishes the shock of contact as well as tends to prevent slipping. Three-quarter shoes are generally used with rubber pads.

The ordinary bar shoe has a variety of uses, among which are these: it restores the frog to its original state of activity, when by reason of disease from faulty

six miles from the Atlantic coast. They are perfectly hardy there in that temperature, which is modified by the ocean.

I will refer your letter to my assistant, Prof. E. R. Lake, who is making a specialty of the Persian walnut, and you will hear from him in due time.—G. B. Brackett, U. S. Pomologist.

Information on Citrus Fruits.

Green's Fruit Grower:—In the November copy of your valuable paper, I noticed an inquiry from Wm. H. Chase, Mass., for a paper on Orange growing.

Peter Henderson & Co., New York, offer a book called "Citrus Fruits," by Prof. Hume, of the Florida Agricultural Experiment Station, price \$2.50.

Farmers' Bulletin No. 238, published by the U. S. Dept. of Agriculture, Washington, D. C., on Citrus Fruits, can be had for the asking.

Mr. S. G. Tetwiler has written for the Gulf States Farmer, New Orleans, La., some of the best articles on Orange growing that I have ever read, and Mr. Chase can possibly get these by addressing Mr. S. G. Tetwiler, care Gulf States Farmer, Box 723, New Orleans, La.

I get a lot of valuable information from Green's Fruit Grower and thought this information might possibly help one of your subscribers.—H. D. Meek, Pa.

Editor's Note: Mr. Meek has our thanks for the above information. I am told that the visitor to Florida or California is liable to be infested with the fever for owning an orange grove. But as far as I can learn from experience, orange groves, especially those in Florida, are not profitable investments on the average. This fact is owing partially at least to the necessity for applying fertilizer freely at large expense, in order to get a vigorous growth on the low sandy soils of Florida.



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January on the Farm.

Still plenty of work, for the stock needs unusual care at this season, and bright days should be utilized by going into the woods and chopping and cording more firewood, that should be kept at least a year in advance. Dry wood is cheaper and better than green.

Keep a sharp eye on the barn, the hen house, the wood pile, and the corn crib. To feed well, and to feed a large stock so as to make it pay, is the way to make the farm yield well at the end of the year. This fact should be looked squarely in the face. It is as cheap to buy food for stock in the shape of oil meal, as it is to buy food for plants in the shape of fertilizers, and it pays to feed oil meal with all the coarse food we put into our stock. An old saying is: "The more stock the more manure, and the more manure the more crops." And by the way, do not forget to give the cows a bit of salt now and then, or what is better, keep a big lump of rock salt where they can get at it all the time. They need it now as much as they do in the spring and fall, and where are they to get it unless you come to their assistance? You know that more than half the blood is made up of salt in some of its forms, and that it is all the time going off through the skin and the kidneys.

Sort over the roots and apples in the cellar occasionally; a little decay among them means a great deal more unless promptly checked by the removal of the cause. Do not allow snow to accumulate about the poultry houses. Shovel it away, and keep the paths open in the vicinity so that the hens can roam about on bright days. It will do them good. If any of the hens show a disposition to set, furnish them with eggs. Chickens hatched in January or February are apt to be valuable in June.

It is not too early to begin to plan the year's campaign. Decide what you will plant, and where. Some of the worn out fields will probably do better if put into grass for a few years, and some of the grass lands in return will yield a rich harvest of potatoes and corn and other crops. Judicious rotation of crops is one of the secrets of prosperous farming. Make a list of the seeds and tools you will need, and send away to a reliable dealer. There may be a delay of some weeks in receiving them, and by the middle of February you will want to begin planting a few seeds in boxes or cold frames for early vegetables.

It is a great point to get a good start in the new year. The first thing is to know how you stand, and to keep square with the world if you can. There is an old saying, you know, that "If you don't look closely into your own affairs, your creditors will do it for you," and that is apt to be the case when things are left at loose ends. Now if you cannot square up all the bills, it will do no harm to see just how they look in black and white. That is the first step. The next is to aim high, and then come as near the mark as you can. Put life into all the work on the farm, and it will not be so apt to drag. And, above all, do not fall into old ruts. Keep up with the times.—F. H. Sweet, Va.

A Horse's Eleven Requests.

1. Don't pound or beat me.
2. Cover me when I am too warm or too cold.
3. Don't stand me in a draft.
4. Don't overload me.
5. Don't compel me to work when I'm sick.
6. Don't cut my feet too much when I'm shod.
7. Don't over-drive and under-feed me.
8. Remember that I have feelings.
9. Don't water me, when I have been driven a long distance, until I am cool.
10. Talk to me kindly.
11. Treat me as you would like to be treated if you were a horse.

Age of Birds.

While life periods for birds have been variously stated at from two years for the wren to 100 for the eagle and crow, such figures have lacked authority. Professor L. Petit has lately brought to the notice of the Zoological Society of France some birds of accurately known age, and these include a sparrow of eight years, a blackbird of 11, a small cardinal of 14, and an Amazon parakeet of 25.—Chicago Tribune.

Giving Animals Medicine.

I never see a man drench an animal with large doses of liquid medicine that I do not feel alarmed for its life. It is easy to strangle an animal in this way because it is impossible to swallow with the mouth open, and if even a small quantity of the liquid goes down the windpipe death may quickly follow. It is better and easier to give medicine in the feed or in powders by forcing open the mouth with an iron spoon and placing the powder on the back part of the tongue when it will quickly and easily be swallowed.—Exchange.

Animals in Cold Weather.

The wild animal that minds cold the least is, undoubtedly, the rabbit. Indeed, it is said that the rabbit is, of all warm-blooded creatures, the most capable of withstanding very low temperatures. A rabbit which had got into a block of ice was imprisoned there twelve hours. When freedom was finally secured, it began almost instantly to feed.

Hares, too, can stand a lot of cold, so long as they can get food. The Alpine hare, which is found in Cumberland and in Scotland, never seems inconvenienced by the worst frosts. The Arctic fox is another creature which no degree of cold seems to bother. It is one of the very few animals of the Arctic regions which does not hibernate.



The woodchuck is an interesting creature. Though a fur bearing animal, we never hear of prices being quoted for woodchuck skins. Possibly this may be in part owing to the fact, that during the winter season when his hairy pelt might be of some use, Mr. Woodchuck is fast asleep deep under ground on some hillside where red clover grows. The woodchuck seems to sleep more than six months of the year. He is not seen until late in May or early June and often disappears the latter part of August, yet he is always sleek and fat. Young woodchucks are almost as playful as kittens.

Of domestic animals, sheep come first as cold resistors. In a great blizzard which swept England in 1891, sheep were dug out of the drifts that had been buried twenty-four hours. They were still alive. Next to sheep in cold weather hardiness come goats and then pigs.

Among the birds, thrushes and blackbirds seem able to endure less cold than the finch tribe, of which the house sparrow is the commonest type. The hedge sparrow appears, of all birds, to be the most affected by cold.

Perch enjoy cold weather and freezes, comfortably making their winter homes in lakes that are frozen practically solid.—Our Dumb Animals.

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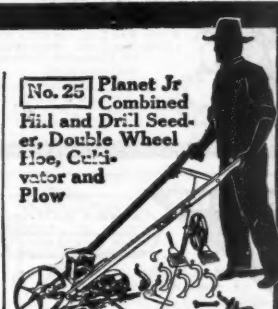
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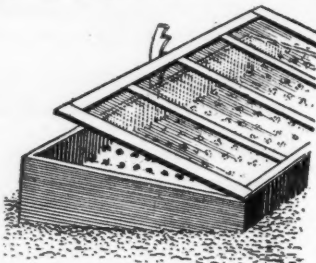
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Cold Frames and Hot Beds.

Written for Green's Fruit Grower.

It is not too early to consider the making of cold frames and hot beds. I have seen pansies in blossom in New York state in midwinter when the bed was protected with a cold frame. This cold frame simply consists of a framework or bottomless box covered with glass. This glass-covered cold frame is placed over the bed desiring to be protected and manure or leaves or earth is placed around the outside of the base to keep the cold wind from entering next to the ground. An inexperienced person would be surprised at the warmth and growth of hardy plants inside of such a cold frame during the winter months.

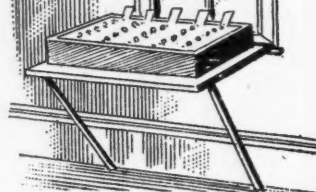


The hot bed is more often constructed on the farm than the cold frame. When living on the farm I was deeply interested in the hot bed. It was a pleasure to see the seeds sprout and grow vigorously when everything outside was seemingly cold and dead.

There is no secret or difficulty in establishing a successful hot bed on the farm. All that is needed is an ample supply of fresh horse manure, which can be stacked to a depth of two or three feet after having been thoroughly trodden down. On top of this a bottomless box is placed and on top of this box or frame are placed the

sash and glass. All should be close fitted to prevent the entrance of cold air and frost.

The surface of the manure is covered with good rich garden soil to the depth of four or five inches. The manure will begin to heat within a week after the bed is completed. The seed should not be sown for several days after the bed is finished. If very cold weather ensues after plants have come up it may be necessary to cover the glass on very cold nights with blankets or matting. It may be necessary to shade the plants on the brightest sunniest days at midday when the air in the hot bed may become too hot. Do not give the bed too much water, which is worse than too little. Plants usually started in the farmer's hot bed are lettuce, radish, tomato, cucumber, melon, egg plant and cabbage.



White Washing Fruit Storage Rooms.

No special formula for whitewashing is necessary, but we have found that in addition to the ordinary lime whitewash that it is advisable to put about a good handful, say two pounds, of Portland cement in each ten-quart pailful of whitewash. The Portland cement should be stirred into each pailful as the whitewash is used. Then add a good size teaspoonful of ultra-marine blue, stirring the cement and ultra-marine blue thoroughly into the ten quarts of lime whitewash. The cement gives the lime a setting quality which the lime does not have when used by itself and the ultra-marine blue is used only to counteract the brown effect of the Portland cement. It is, of course, unnecessary to state that you must not leave any of this mixed cement, and lime whitewash overnight, or the cement will lose its value as a setting agent in keeping the whitewash from flaking or peeling off the walls. Don't put on too thick a coat of whitewash each year. Just enough to cover the surface in good shape, and don't dry the whitewash out too quickly nor too slowly. It should require from one to two or possibly three days to dry out. If it dries quickly it may flake or brush off easily, whereas if it dries too slowly the water will soak into the wood and may cause mould or unpleasant odors.—Cold.

How to Grow Strawberries.

How strawberries are grown in Maryland is told very interestingly in Bulletin 124 of the Maryland experiment station. The strawberry is so peculiar in its adaptability to soil and climatic environment, that it is unwise to recommend varieties except with restrictions, says the writer. A variety will succeed admirably in one locality and fail dismally a few miles distant. It is well to plant principally the varieties which do well in the neighborhood and test new varieties which seem to be promising. We use fertilizers as follows:

Per acre—100 lbs. nitrate of soda, or 75 lbs. sulphate of ammonia, or 250 lbs. cottonseed meal; 90 lbs. sulphate of potash or 95 lbs. muriate of potash, or 400 lbs. kainit; 250 lbs. acid phosphate, or 250 lbs. dissolved bone.

A little variation from the above is: 500 to 1,000 lbs. per acre—500 to 700 lbs. ground fish, bone meal or tankage; 200 lbs. muriate of potash; 1,100 to 1,300 lbs. acid phosphate

Other amounts sometimes used are: Per acre new beds—200 lbs. muriate of potash; 600 lbs. dissolved S. C. rock

Per acre old beds—100 lbs. nitrate of soda; 200 lbs. muriate of potash; 200 lbs. dissolved S. C. rock.

For new beds the fertilizer should be applied in spring, before the plants are set, either broadcast by wheat drill, or otherwise, or along the rows. In either case, but especially in the latter, the fertilizer must be thoroughly mixed into the soil with the cultivator or it may injure or destroy many of the plants.

Woman's Profit With Currants and Gooseberries.

No reason appears why a woman on a farm cannot earn considerable money and not have to work especially hard considering the results. It may be done by raising currants and gooseberries, says The American Cultivator.

In setting out currant bushes, one should be careful to select a place where there is plenty of light and air. They do not require especially fertile soil, but they do need the sunlight and air. If possible do not put the bushes where they will be weighted down by snow in the winter for this breaks the branches.

The ground should be worked thoroughly and very deep before setting out the bushes, for after the planting only a very shallow cultivation can be done, as the currants are a surface rooting plant. Rotted manure is one of the best fertilizers for working into the land, and after the currant bushes have been set out, this will be found excellent as a mulch.

Hardy one year old plants are found to be among the best for starting a new piece. The plants begin to bear the year after planting and come into full maturity in the third year. If they are given careful care, they will produce paying crops for a score of years. Pruning should be done in the early spring, cutting out all the dead and weak branches and heading back the most vigorous growth.

One great advantage about currants is that the fruit does not have to be picked just as soon as it is ripe. It may stay on the bushes for some time without doing any harm. In gathering, the stems are picked with the fruit and put in the cases for sale. An average crop per acre is 100 bushels, although more can be raised if special care is given to the bushes. Currants sell for about ten cents per quart.

It will be seen that the currant is an easy plant to raise as well as a very profitable one. The same is true of the gooseberry. Very few diseases attack these plants. The currant worm can be killed by applying pyrethrum powder. If there is any disease found to be among the branches it is best to break off the afflicted ones at once, and thus prevent the spread of the trouble.

The methods of planting and caring for the gooseberry plants are practically the same as those used in dealing with the currants. It was formerly thought that gooseberries would do best in a shady place, but this is not true. Mildew will attack them if they are kept shaded. The only thing to prevent this is to have the plants kept open at the top.

Winter Mulch of Strawberries.

Do not forget to apply a light dressing of straw stable manure now over your strawberry bed or larger plantation. This covering is not intended to keep the ground warm or to keep it from freezing. It is intended to shade the ground to prevent repeated thawing and freezing which lifts the plants and breaks the roots doing them great injury. I have known strawberries to be covered so heavily as to smother them, but generally there is not much danger of too heavy covering. Forest leaves are an ideal covering for they do not contain the seeds of weeds and grass as does straw manure. Leaves can be held in place by cornstalks, old tomato vines or brush.

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From an Expert on Cranberry Culture.

Written for Green's Fruit Grower by
Stephen S. Gammons, Mass.

Cranberries are successfully cultivated in the eastern parts of Massachusetts, where there is a suitable location, but I do not know of any cultivated cranberry bogs farther north. They are raised extensively in New Jersey and Wisconsin, and some in other states, put principally in these two and southeastern Massachusetts, where they are called the Cape Cod cranberries.

In looking for a suitable location to cultivate cranberries there are several things to consider. It is necessary to find a tract of low, swampy land with a stream of water running through it. It must then be ascertained whether the land can be drained properly. A stream is most desirable, but many bogs are controlled by artificial water supplies, which are very expensive. There must also be plenty of good yellowish sand, free from loam. Sand is required to cover the whole surface of the bog about four inches deep when made, and an inch or two additional about every second year, in order to keep the vines in a good, healthy, productive condition.

We begin by cutting the wood, clearing the land. At this time of year (December, January and February) the tree stumps should be left about three feet high, as the roots are more easily removed by using the stump as a handle after cutting with a turf axe all around the stump where the roots are liable to terminate. When the wood is cut and removed, leave the stumps until all of the underbrush has been mowed down by a brush scythe. Then rake it up in piles to burn.

Next comes the turving (the removal of it) all over the surface planned for the cranberry bog. This is done by cutting the turf which contains the little roots of underbrush and vines. Cut it in squares about two feet each way. When that is done the next process is "pulling the turf," which is done with a long handled hook made for the purpose. A little of the turf may be needed to grade up some real low parts, but generally the turf is thrown into wheelbarrows and carried off of the bog. Now that the turf is removed all around the stumps they can be removed much more easily than before by cutting all the roots on one side and turning over on the other side. Then cut the remaining roots, supposing that most of the trees were small, mostly maple, some pine and some birch. Occasionally dynamite is used to get out the big stumps.

Below the turf is the proper soil in which to root cranberry slips. When the brush and stumps are burned and the whole surface is graded, using part of the cut turf in low places (which should be free from roots), then divide the lot into sections containing about a quarter of an acre each. Each section is surrounded by a ditch about a foot and a half each way. The dirt thrown out of the ditch can be used for grading.

When all the above work is done, next comes the "sanding," which is best done in March as it will be necessary to grade a little more after the frost gets out of the ground in the spring.

Editor's Note: We saw the remarkable showing of cranberries at the New England Fruit Show at Boston. There were several different varieties, large, medium and small. Some were highly colored, from deep red, almost black, to very light red or pink. There is undoubtedly an increasing interest in cranberries, an important food item, appetizing and healthful.

One of the well known Aroostook county potato growers and dealers gave a statement before a recent railroad land hearing regarding the cost of production. He estimated that for an average of years he found that the cost of raising the potatoes is 36 cents per bushel. His figures were based on an average crop of 200 bushels and use of a ton of high grade fertilizer. The fertilizer cost about one-half of the total estimate of the crop. The present year is likely to be one of the banner seasons for the Aroostook growers; they have the combination of a good crop here, a brisk demand and a short crop in other sections. But next year look out for too much enthusiasm and over-planting of this leading money crop.

A treatment with creosote is found to increase the durability of all kinds of fence posts, and it helps the soft, perishable woods more in proportion than it does the naturally durable kinds like cedar and chestnut. The plan is already quite popular in the south and west. In this section the abundance of good posts naturally leads farmers to go out and cut fresh ones from their chestnut and cedar groves, rather than to go to the expense of preserving inferior woods. But cedar is becoming scarce and chestnut bark disease, it is predicted, will destroy our chestnut groves. Then the only hope of the fence builders will be the use of preserving mixtures.

Jonny's Rezolushuns.

Written for Green's Fruit Grower by
Uncle Dudley.

On the last nite ov the old year Jonny Waker sat at the tabul with hiz slate an pensil in hand engaged in deep thot. Sudinly he komenced tu write an aftur he hed laid down the slate an retired it wuz found that he hed written the folloin:

Mi Rezolushuns
Bi Jonny Waker

Rezolved thet i wunt tel eny more lize, unles its necessary.

Rezolved thet i wunt teze ther kat or pul her tale, unles i cant rezist ther temtashun.

Rezolved that i wunt slam eny dores, unles i furget.

Rezolved thet i wunt sass enybudy, unles under grate proverkashun.

Rezolved thet i'll tri tu plesse everybudy, purvided it'll pay me tu do so.

Rezolved thet i wunt pla eny meen triks on eny won unles i cant rezist the temtashun.

Rezolved thet i wil git mi lesuns, if i cant git erlong without.

Rezolves thet i'll oba mi teecheer, if i must.

Rezolved thet i wunt pleg ther gals, unles i think they want me tu.

Rezolved thet i'll keep in with ma, an be good tu her kaws she gives me nice things tu eat, an when dad thretuns tu shak the pudin strings outen me, or skin me alive, she taks mi part and so i hev saved mu pudin strings, an haint lost nary er skin.

Rezolved thet i wunt be so lo an meen as tu cut up in ther meetin hous an disturb the meetin.

The government has not done enough for the farmer. The national banks have been forbidden to loan money to farmers. Loans to improve farms have been so hard to get, and so costly when they were secured, that farmers have been kept poor; many have "moved away;" rural population has grown only eleven per cent., while cities have grown twenty-seven per cent.; farm owners have increased only eight per cent. while tenant farmers have increased sixteen per cent.

A farm tenant is usually too poor to buy the farm and often too hopeless to improve it. So this has come to pass: Our banks, with the benevolent aid of the government, have increased their resources eight-fold. Our manufacturers, also wisely protected by the government, have increased their product six-fold. But the American farmer, on whom all must depend wholly for food and partly for clothes, has increased his production less than ten per cent. while population was increasing nearly twenty-five per cent.

Hence the oppressive rise in the cost of living, especially of food. The purchasing power of one dollar, based on prices of 1897, is now about seventy-eight cents in England and France, seventy-nine cents in Germany, and only sixty-nine cents in the United States.

The government sent an agricultural commission abroad last summer to find out why our dollar has contracted more rapidly than the Englishman's and the Frenchman's and the German's dollar.—N. Y. American.

Bees Are Eaten at Their Hive by Skunks.

The little animal so highly prized for his coat and known as the skunk, which is very numerous this season not only in the rural districts but in many villages, is committing depredations along a new line in Manchester.

On the E. H. Perry fruit farm there is an apiary, and the production of honey is made a commercial enterprise. For a few weeks it has been noticed by Mr. Rowley, manager of the farm, that the bees in the hives were each day becoming less in number, and it was first feared that disease of some kind was working destruction in many of the hives.

This theory was suddenly changed by finding skunk tracks around the hives. A watch was kept and a skunk was seen to approach a hive of bees in the moonlight, and scratch his claws along the side, when the bees would crawl out and were instantly devoured by the skunk. So bold had the skunks that were engaged in the robberies become that two were shot in one day at the Perry farm while coaxing the bees to come forth.

It is hardly necessary to suggest that a wound resulting from the bite of an animal should be thoroughly cleansed; carbolic acid should be thoroughly applied and then neutralized with alcohol, and the wound covered with a large, wet, antiseptic dressing. Of course this local dressing alone is not to be depended on when the diagnosis of rabies in the animal inflicting the wound has been established. As soon as this condition of the animal is definitely determined, the patient should be given the benefit of the Pasteur treatment which is most effective when begun within a fortnight after the wound was inflicted.

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Start a young orchard this spring. An old orchard should not be depended on—it may be unprofitable because of disease, low yields and wrong varieties. Plant at least a thousand trees (on ten acres). Use only varieties that yield the heaviest and command the highest prices.

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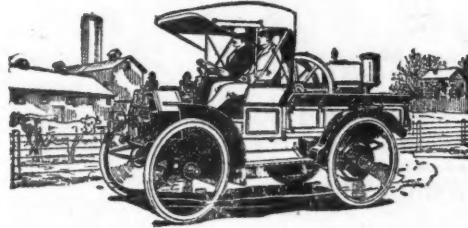
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- 4835—Shirt Waist Suit. Cut in sizes 4, 6, 8, 10 and 12 years. For 8 years it requires $\frac{2}{3}$ yards of 36 inch material. Price 10 cents.
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WOMAN'S Department

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Household Notes.

One of the nicest and most economical shortenings for pie crust is made from equal parts flank or cod fat and lard. Try out separately and when half cooked beat together until light and creamy. The French use this for their best pastry.

Clean iron holders are the exception rather than the rule. They need not be, for little washable cases open at one end like a pillow slip, are easily made, and can be renewed as often as desirable with little trouble. Tie cases on with tapes.

Rice boiled in milk instead of water has much richer flavor. It must be watched closely while being cooked, as it will burn quickly.

Fried Oysters.—One pint of oysters drained from liquid. Roll them in cracker crumbs seasoned lightly with salt and pepper. Let stand until crumbs become moist then dip them in fine cornmeal and fry a delicate brown in butter or fresh sweet lard.

Warm Gingerbread.—One-half cup butter, fill the remainder of cup with boiling water. One-half cup sugar, fill the remainder of cup with dark molasses. Two cups flour, 1 egg, 2 teaspoons ginger and a little cinnamon. Half of this recipe is enough for four persons.

Baked Liver.—Few people know how delicious calf's liver is when baked instead of fried. Place whatever quantity you have, in a chunk (not sliced), in a small pan with a little water and a generous lump of butter. Salt this well and baste often. When it is sufficiently done it usually shrinks to about half its original size. When served hot it is delicious, but when served cold and sliced and garnished, it makes a real delicacy for supper. Any bit left over makes a nice addition to the school luncheon.

Apple Cake.—Cream together a half-cupful of butter and two cupfuls of sugar and beat into them a half cupful of milk and five whipped eggs. Last of all, add three cupfuls of flour into which have been sifted two small teaspoonfuls of baking powder. Bake in layers. When cold make the filling by heating in a double boiler a cupful of apple sauce, adding sugar to taste, and then beating in gradually the yolks of two eggs and the juice of a lemon. Cook, stirring for a minute, and set aside until cold before spreading on the cake.

Brown Betty.—Peel and chop enough apples to make two cupfuls. Have ready one cupful of fine bread-crumbs and two tablespoonfuls of butter, cut into small bits. Butter a bake dish and put in the bottom of it a layer of chopped apple, sprinkled with sugar, bits of butter and a very little cinnamon; over this spread a layer of crumbs. Then comes another layer of apple and so on until the dish is full. Top with bread-crumbs and butter. Bake closely covered for forty minutes; remove the cover, set the dish on the upper grating of the oven, and brown the pudding. Serve hot with hard butter and sugar sauce.

Tarts.

Nearly every one has a good appetite for old-fashioned dainty tarts. Roll out nice, tender pie crust rather thin, and cut into disks with a cookie cutter. Cut strips of the rolled out piecrust about half an inch wide and after moistening around the edge of the disks, press the strips on and neatly join together. After the tarts are thus made and baked, fill them with any kind of jelly. Currant is perhaps the most palatable, or apple sauce may be used. The strips around the edge may be stood around plain, or they may be twisted prettily, or rolled so they are round, before putting them onto the moistened bottoms. A plateful of tarts is an attractive addition to the table.

Mint Jelly.

Nothing is better with cold sliced meats than mint jelly. To make, take one-half cup finely chopped mint leaves, one-half cup sugar, and three-fourths of a cup of vinegar. Let stand two hours. Soak two tablespoonfuls of gelatine in one-half cup of cold water; then dissolve in one-half cup of boiling water. Add to the mint mixture. When firm, slice in half-inch slices and serve with the meat. A lemon can be added to the mint if desired.

Pancakes in England.

London Chronicle.

We still eat pancakes, but their preparation is no longer heralded by ringing the church bells. The "pancake bell," however, was formerly sounded at 11 o'clock on Shrove Tuesday, and its effects have been described by Taylor, the Water poet: "As the clock strikes 11 there is a bell rung, called the Pancake Bell, the sound whereof makes thousands of people distracted and forgetful of manners and humanity. Then there is a tiring called wheaten flour, which the cooks do mingle with water, eggs, spice and other tragical, magical enchantments, and then do put into a frying pan of boiling suet, until it is transformed into a flipjack, called a pancake, which ominous incantation the common people do devour greedily."

Forty-two per cent. of the women who became famous because of political influence or ability were married more than once.

It is said in olden days some housewives took advantage of the winter time to freeze pie crust. Frozen pie crust is much lighter than otherwise. Crust enough to last for weeks was made at a time, kept frozen and used as occasion demanded.

The Proposal.

The proposal is that when candidates for marriage present themselves the man be required to show that he has the means of providing a suitable home or is capable of providing the means; that he can and will support the woman in "the style to which she has been accustomed" and that his temper and disposition is such as to make fair the presumption that he will do his share toward making a happy home. The woman is required to prove beyond a reasonable doubt that she not only possesses the domestic virtues in good measure but that she has the skill and the will to manage a home from the kitchen to the guest chamber, economically, wisely and cheerfully.

Thoughts in a Cemetery.

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"Far from the madding crowd's ignoble strife
Their sober wishes never learned to stray.
Along the cool sequester'd vale of life
They kept the noiseless tenor of their way."

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Dingee roses are always grown on their own roots—and are absolutely true to the standard planter. Write for our "New Guide to Rose Culture" for 1914—it's free. It is a catalog—it is an educational work on rose growing. Profusely illustrated—the cover pictures the new Charles Dingee rose, best, hardiest free-blooming rose in America. We have plan to prepay all express charges and guarantee safe delivery. Est. 1850. 70 greenhouses.
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Indispensable to the Well Dressed Woman



hem, thus reducing the work of measuring, marking and turning to a minimum. It prevents expensive mistakes, saves time, work, worry and more than its cost on the first skirt made. It is made of nicely polished, nickel plated steel and will last a lifetime. It is also an excellent chalk marker.

DIRECTIONS—Set gauge on the floor so that the skirt will fall over the long wire, making it come under or inside of the skirt. Fold the goods under, so that the long wire will come inside the fold, as shown in illustration No. 1 and pin the hem in place. Slide the gauge along and repeat. The Ezy-Hem can easily be used as a chalk marker also. Place the gauge with the long wire finger outside and against the goods, and simply draw chalk along the wire lengthwise, using the wire as guide or rule.

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Send one year's subscription—new, renewal or extension—and this splendid gauge—easily worth 50c—is yours without cost. Send subscription now before you forget it—only 50c—and while we can furnish the gauges. Address:
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W. A. Bode, Expert Penman, Box 177, Fairhaven, Pa.

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FITS YOUR OLD LAMP.
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HOME SUPPLY CO., 14 Home Bldg., Kansas City, Mo.

AUNT HANNA'S REPLIES

Let those love now who never lov'd before,
Let those who always loved now love the more.
Parnell.

Dear Aunt Hanna:—I have been a reader of Green's Fruit Grower for a number of years, and while I am interested in all that valuable paper contains I have never paid much attention to Aunt Hanna's column until I saw in the September number the article on "Securing a Wife for a Widower."

I am a widower of eight years standing and am curious to know how you go about to bring the widows and widowers back into the fold again. It must be a delicate and thankless undertaking. An unhappy marriage is not always the fault of the individual character of either party, but rather a careless or hasty selection and a consequent mismatching of characters and of deep-rooted ideas, habits, etc.

There are many good men and women living all alone, without ties, without comfort or enjoyment, just existing, that would make excellent husbands and wives, possessed with all the requirements to make a good home, if they were only lucky enough to find a mate that would be congenial to their own intellectual and moral ideas. If two young people of different individuality are married and really love each other, in the course of time these differences will equalize and blend and the children will claim their joint affections and draw them closer together as time goes on. They know each other's virtues and faults, are able to avoid unpleasant squabbles, and everything goes on fairly pleasant until death claims one of them.

After awhile the children are all gone, having established homes of their own, and before we realize it we are all alone again as in the beginning. The house is empty and cheerless. Even old Tabbie feels lonesome and rubs up against us, looking up at us so that we can almost read the query in her eyes, "What is the trouble? Where is all the former noise and bustle? Where are Jack and Lizzie, Edna and Billy?" There is no such thing as a real home for a lone person. There are many of us with fine houses and lands but they do not make home. We may have a comfortable income but cannot enjoy it. There is a German saying, "Divided sorrow is half sorrow, but divided joy is double joy." The only solution is to "find a mate to match," that is one that is congenial, that is morally and intellectually our equal. Love's dreams have passed us long ago and we must be satisfied with high respect esteem and implicit confidence in each other.—A Reader, Montana.

Note by the Editor: I am interested in the above welcome letter and desire to add that my experience is that men and women who love each other are enjoying married life even though there is a wide difference in tastes, desires or methods of living. Such is the case with myself and wife. We differ in opinion and somewhat in tastes and yet live happy married lives. Where there is deep and undying affection we should be able to get along with differences and with strong wills. I am a strong willed individual and my wife is equally strong willed, and yet we do not clash, nor do we strive to subdue each other. It is hard work making a happy home where the burden falls almost entirely upon either the husband or wife. There should be united action on the part of both to make home the most attractive place on earth.

Dear Aunt Hanna:—Why should we be encumbered with skirts when we could be made far more comfortable by wearing garments similar to those worn by men?—Laboring Subscriber.

Aunt Hanna's Reply: I am glad to have an opportunity to answer the above question for I have never been able to see any good reason why women should not wear trousers. The women of Japan and China wear trousers. Their coats are in the form of a skirt.

It is my opinion that no one can give a satisfactory reason why cumbersome dresses should be worn by women or why trousers are immodest. Women wear dresses and are deprived of the privilege of wearing trousers simply for the reason that such has been the custom through many centuries and for no other reason. Perhaps in the remote past the women of the laboring classes, who had to do work in the fields, wore trousers, and the women of the leisure classes who dwelt in palaces were clad in flowing robes because they had no work to do, and these robes were considered more graceful; so in the course of time it became a mark of social superiority and therefore sought by all.

If men had been compelled to wear dresses, and fashion had decreed women

only should wear trousers during the past 300 years, women might now be in the ascendency and man might have degenerated, for dresses are an encumbrance so great as to prevent woman from doing her best work in any industry, and absolutely ruling her out of many forms of labor. How could a man dig a ditch or a sewer, dig out rocks and stumps, lay up walls of brick and stone, climb high buildings or steeples in order to paint, or to rivet together steel beams, or climb masts or spread sails at sea, or climb over the roofs of fast speeding railway trains, or do many other lines of work encumbered with such garments as women wear.

The noted singer, Miss Tyte, who was not allowed to land in New York City from the steamship while wearing trousers, says that dresses are immodest and trousers are not. She says that trousers leave nothing to the imagination while dresses do.

If there were anything indecent about the wearing of trousers, Maud Adams, the noted and highly esteemed artist, would not wear them so conspicuously upon the stage in every act of the delightful play Peter Pan. No one thinks of criticising her for appearing without skirts upon the stage.

Aside from the inconvenience of wearing cumbersome skirts and dresses, why has not more been said about the fact that such dresses are not sufficient protection from the cold blasts of winter. Trousers are far warmer than dresses, as anyone must decide who gives the question a moment's thought.

Many children and others wearing flimsy dresses have lost their lives by fire. Girls playing with fire in the yard set fire to their dresses while their boy companions escape though similarly exposed. Women over gas or gasoline cook stoves have lost their lives, whereas if they had been wearing the substantial clothing worn by men they would have escaped.

On windy days in cities I have seen women swept off their feet, whereas if they were dressed more as men do they could have passed through the streets with safety.

Owing to the prejudice against women wearing trousers, society ordained that women should not ride astride of horses. Owing to this edict of fashion women were for more than a hundred years compelled to ride on side saddles, which are not only uncomfortable but dangerous.



Explained.

"You are going to the wedding, Jean Pierre, and you look so sad!"
"I should think so. It is my own marriage."—Le Rire (Paris).

If You Owe Money Get a \$10 Bill Like This One.

Godey's Lady's Book and Magazine, July 1877.

Mr. Brown kept boarders. Around his table sat Mr. Brown, Mrs. Brown, Mrs. Andrews, the village milliner; Mr. Black, the baker; Mr. Jordan, a carpenter, and Mr. Hadley, a flour and lumber merchant. Mr. Brown took out of his pocket book a \$10 note and handed it to Mrs. Brown, saying:

"Here, my dear, are the \$10 toward the \$20 I promised you."

Mrs. Brown handed it to Mrs. Andrews, the milliner saying:

"That pays for my new bonnet."

Mrs. Andrews said to Mr. Jordan as she handed him the note:

"That will pay for your work on my counter."

Mr. Jordan handed it to Mr. Hadley, requesting his lumber bill, while Mr. Hadley gave it back to Mr. Brown, saying:

"That pays \$10 on my board."

Mr. Brown passed it to his wife, with the remark that that paid her the \$20 he had promised her. She, in turn, paid it to Mr. Black to settle her bread and pastry account, who handed it to Mr. Hadley, wishing credit for that amount on his flour bill, he again returning it to Mr. Brown, with the remark that it settled for that month's board. Whereupon Mr. Brown put it back into his pocketbook, exclaiming that he "never thought a \$10 bill would go so far."

Thus a \$10 greenback was made to pay \$90 indebtedness inside of five minutes.

What Makes a Good Sprayer?

High Pressure—to throw a strong, fine spray. **A Pump**—of sufficient capacity under slow speed. **An Agitator**—to keep mixture well stirred. **Some Method of Cleaning** the strainer. Ask any fruit farmer with experience. He will tell you that the most annoying thing is to find pump suction or nozzles clogged when he has a tank full of spray mixture in the orchard and must clean out before his sprayer will work.



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Firm, yet delicate flesh. Half to third larger than Elberta. Rich golden color, tinged carmine. Perfect freestone. Smooth skin, practically fuzzless! Stands shipment like apples. Round shape for preserving. Luscious peachy flavor. Hardy in wood and in bud. Ripens earlier than Elberta, with long fruiting season.

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We have cut out the middleman's profits. We grow our trees at Stark City, Mo., and sell to you direct by mail. So you save the 30 to 50 per cent. usually paid for agents' commissions, traveling expenses, etc. And you get the benefit of personal dealing. We grow nothing but selected trees, all standard varieties, doubly guaranteed true to name by the strongest of guarantees.

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- 5838—Boys' Knickerbockers, with or without fly. Cut in sizes 4, 6, 8, 10, 12 and 14 years. Age 8 requires $\frac{3}{4}$ yard of $\frac{5}{8}$ inch material. Price 10 cents.
- 4830—Ladies' One-Piece Apron. Sizes 32, 36, 40 and 44 inches bust. Size 36 requires 3 yards 36 inches wide. Price 10 cents.
- 5945—Girls' Dress with Skirt Attached to Underwaist. Sizes 6, 8, 10 and 12 years. Age 8 needs $\frac{3}{4}$ yards 36 inch goods for dress. Price 10 cents.
- 4817—Boys' Suit. Sizes 2, 4 and 6 years. Age 4 requires 3 yards 36 inches wide; $\frac{3}{4}$ yard 27 inch contrasting goods. Price 10 cents.
- 5495—Ladies' Shirt Waist. Cut in 6 sizes. 32 to 42 inches bust. Size 36 requires 2 yards of 36 inch material. Price 10 cents.
- 5700—Children's and Girls' Sack Night-Gown. Cut in 6 sizes. 2 to 12 years. Age 8 requires $\frac{3}{4}$ yards 36 inch material with $\frac{2}{3}$ yards edging. Price 10 cents.
- 5944—Ladies' Dress, Having Four Gored Skirt. 5 sizes, $\frac{3}{4}$ to 40 inches bust measure. Size 36 requires $\frac{2}{3}$ yards 36 inch goods; $\frac{4}{5}$ yards 44 inch goods. Price 10 cents.
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- 5995—Ladies' Shirt Waist. Cut in 6 sizes, 32 to 42 inches bust measure. Size 36 needs $\frac{3}{4}$ yards 27, or $\frac{2}{3}$ yards 36 inch goods. Price 10 cents.
- 4635—Shirt Waist Suit. Cut in sizes 4, 6, 8, 10 and 12 years. For 8 years it requires $\frac{2}{3}$ yards of 36 inch material. Price 10 cents.
- 5872—Ladies' Two-Piece Skirt. 5 sizes, 22 to 30 inches waist. Size 24 measures $\frac{2}{3}$ yards around the lower edge and requires $\frac{2}{3}$ yards of 44 inch material. Price 10 cents.
- 5803—Ladies' Dress with Three-Piece Skirt. Cut in 6 sizes, 32 to 42 inches bust. Size 36 requires $\frac{4}{5}$ yards 36 inch goods. Price 10 cents.
- 4847—Doll's One-Piece Dress. 7 sizes, 14 to 26 inches long. Size 24 requires 1 yard of 36 inch material, $\frac{1}{4}$ yards of edging. Price 10 cents.



4847—Boys' Russian Blouse Suit. Sizes 2, 4 and 6 years. Size 4 years requires $\frac{2}{3}$ yards of 36 inch material. Price 10 cents.

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Order patterns by number and give size in inches. Address Green's Fruit Grower Co., Rochester, N. Y.

Household Notes.

One of the nicest and most economical shortenings for pie crust is made from equal parts lard or cod fat and lard. Try out separately and when half cooked beat together until light and creamy. The French use this for their best pastry.

Clean iron holders are the exception rather than the rule. They need not be for little washable cases open at one end like a pillow slip, are easily made, and can be renewed as often as desirable with little trouble. Tie cases on with tapes.

Rice boiled in milk instead of water has much richer flavor. It must be watched closely while being cooked, as it will burn quickly.

Fried Oysters.—One pint of oysters drained from liquid. Roll them in cracker crumbs seasoned lightly with salt and pepper. Let stand until crumbs become moist then dip them in fine cornmeal and fry a delicate brown in butter or fresh sweet lard.

Warm Gingerbread.—One-half cup butter, fill the remainder of cup with boiling water. One-half cup sugar, fill the remainder of cup with dark molasses. Two cups flour, 1 egg, 2 teaspoons ginger and a little cinnamon. Half of this recipe is enough for four persons.

Baked Liver.—Few people know how delicious calf's liver is when baked instead of fried. Place whatever quantity you have, in a chunk (not sliced), in a small pan with a little water and a generous lump of butter. Salt this well and baste often. When it is sufficiently done it usually sinks to about half its original size. When served hot it is delicious, but when served cold and sliced and garnished, it makes a real delicacy for supper. Any bit left over makes a nice addition to the school luncheon.

Apple Cake.—Cream together a half-cupful of butter and two cupfuls of sugar and beat into them a half cupful of milk and five whipped eggs. Last of all, add three cupfuls of flour into which have been sifted two small teaspoonfuls of baking powder. Bake in layers. When cold make the filling by heating in a double boiler a cupful of apple sauce, adding sugar to taste, and then beating in gradually the yolks of two eggs and the juice of a lemon. Cook, stirring for a minute, and set aside until cold before spreading on the cake.

Brown Betty.—Peel and chop enough apples to make two cupfuls. Have ready one cupful of fine bread-crumbs and two tablespoonfuls of butter, cut into small bits. Butter a bake dish and put in the bottom of it a layer of chopped apple, sprinkled with sugar, bits of butter and a very little cinnamon; over this spread a layer of crumbs. Then comes another layer of apple and so on until the dish is full. Top with bread-crumbs and butter. Bake closely covered for forty minutes; remove the cover, set the dish on the upper grating of the oven, and brown the pudding. Serve hot with hard butter and sugar sauce.

Tarts.

Nearly every one has a good appetite for old-fashioned dainty tarts. Roll out nice, tender pie crust rather thin, and cut into disks with a cookie cutter. Cut strips of the rolled out piecrust about half an inch wide and after moistening around the edge of the disks, press the strips on and neatly join together. After the tarts are thus made and baked, fill them with any kind of jelly. Currant is perhaps the most palatable, or apple sauce may be used. The strips around the edge may be stood around plain, or they may be twisted prettily, or rolled so they are round, before putting them onto the moistened bottoms. A plateful of tarts is an attractive addition to the table.

Mint Jelly.

Nothing is better with cold sliced meats than mint jelly. To make, take one-half cup finely chopped mint leaves, one-half cup sugar, and three-fourths of a cup of vinegar. Let stand two hours. Soak two tablespoonfuls of gelatine in one-half cup of cold water; then dissolve in one-half cup of boiling water. Add to the mint mixture. When firm, slice in half-inch slices and serve with the meat. A lemon can be added to the mint if desired.

Pancakes in England.

London Chronicle.

We still eat pancakes, but their preparation is no longer heralded by ringing the church bells. The "pancake bell," however, was formerly sounded at 11 o'clock on Shrove Tuesday, and its effects have been described by Taylor, the Water poet: "As the clock strikes 11 there is a bell rung, called the Pancake Bell, the sound whereof makes thousands of people distracted and forgetful of manners and humanity. Then there is a tiring called wheaten flour, which the cooks do mingle with water, eggs, spice and other tragical, magical enchantments, and then do put into a frying pan of boiling suet, until it is transformed into a flipjack, called a pancake, which ominous incantation the common people do devour greedily."

Forty-two per cent. of the women who became famous because of political influence or ability were married more than once.

It is said in olden days some housewives took advantage of the winter time to freeze pie crust. Frozen pie crust is much lighter than otherwise. Crust kept to last for weeks was made at a time, kept frozen and used as occasion demanded.

The Proposal.

The proposal is that when candidates for marriage present themselves the man be required to show that he has the means of providing a suitable home or is capable of providing the means; that he can and will support the woman in "the style to which she has been accustomed" and that his temper and disposition is such as to make fair the presumption that he will do his share toward making a happy home. The woman is required to prove beyond a reasonable doubt that she not only possesses the domestic virtues in good measure but that she has the skill and the will to manage a home from the kitchen to the guest chamber, economically, wisely and cheerfully.

Thoughts in a Cemetery.

How far we have gone away in our age of mad progress and fierce intensity of living from the imperturbable attitude of Gray, who experienced such thoughtful pleasure in seeing the place where the "rude forefathers of the hamlet" lay at rest, says Post Express. They had in their toiling lives risen at daybreak; they worked in the harvest fields; their ploughs broke "the stubborn glebe"; they sang gaily as they drove their teams afield; the woods "bowed beneath their sturdy stroke"; and when at sunset they returned to "the blazing hearth," their children ran to meet them, the youngest fondly climbing his father's knee. And at the close of a useful though obscure existence, they found repose in a country churchyard. After all, they were happy—at any rate the eighteenth century poet so imagined their lot—for untouched by luxury and pride, they were satisfied to live and die undistinguished toilers:

"Far from the madding crowd's ignoble strife
Their sober wishes never learned to stray.
Along the cool sequester'd vale of life
They kept the noiseless tenor of their way."

The "rustic moralist" was wiser than the ambitious "self-made" man of today. He did not "make his pile." He never dreamed that one day it would become the almost universal practice to ride in automobiles. But many a "holy text"—a simple faith that dared not question the exhortations in the parson's Sunday sermon—taught him how "to die." Does it not all amount to this: that we pass away, that we are buried, that we hope for eternal bliss, and that to the Christian hope is never vain?

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Dingee roses are always grown on their own roots—and are absolutely true to the color of the planter. Write for our "New Guide to Rose Culture" for 1914—it's free. It isn't a catalog—it's an educational work on rose growing. Profusely illustrated—the cover pictures the new Charles Dingee rose, best, hardiest free-blooming rose in America. We have plans to prepay all express charges and guarantee safe delivery. Est. 1850. 70 greenhouse, The Dingee & Conard Co., Box 152, West Grove, Pa.

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100 Post Card Specials, any above subjects, 60 cents.
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FREE THE EY-HEM SKIRT GAUGE

Indispensable to the Well Dressed Woman



HANDIEST help ever invented for home dressmaking, as it assures absolute accuracy and style in the correct "hang" of the skirt. It can be adjusted to any height and easily used by professional or beginner. Heretofore all skirt gauges were only skirt makers, but the EZY-HEM enables a woman to turn the skirt the right length and pin it up all ready to hem, thus reducing the work of measuring, marking and turning to a minimum. It prevents expensive mistakes, saves time, work, worry and more than its cost on the first skirt made. It is made of nicely polished, nickel plated steel and will last a lifetime. It is also an excellent chalk marker.

DIRECTIONS—Set gauge on the floor so that the skirt will fall over the long wire, making it come under or inside of the skirt. Fold the goods under, so that the long wire will come inside the fold, as shown in illustration No. 1 and pin the hem in place. Slide the gauge along and repeat. The EZY-HEM can easily be used as a chalk marker also. Place the gauge with the long wire finger outside and against the goods, and simply draw chalk along the wire lengthwise, using the wire as guide or rule.

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HOME SUPPLY CO., Dept. 224, Chicago, Ill.

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We pay 50 per cent. Send poems or melodies; they may make you a fortune. Hayworth Music Co., 611, Washington, D. C.

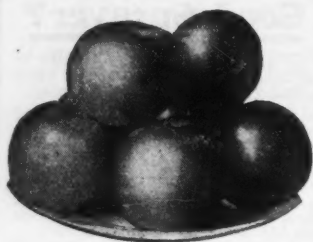
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100 Candle Power Incandescent pure white light from (kerosene) coal oil. Beats either gas or electricity. COSTS ONLY 1 CENT FOR 8 HOURS. We want one person in each locality to whom we can refer new customers. Take advantage of our Special Offer. Secure a Beacon Burner FREE. Write today. AGENTS WANTED.
HOME SUPPLY CO., 14 Home Bldg., Kansas City, Mo.

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Choice Fruit

is the result of efficiency methods. Right cultivation, pruning and spraying with

SHERWIN-WILLIAMS INSECTICIDES

produce that kind of fruit. Free from insects and disease marks, regular in shape, and rich in color, they at once appeal and price is forgotten.

Grow that profitable quality by spraying with S-W Dry Powdered Arsenate of Lead, S-W New Process Arsenate of Lead (containing Adhesive Lead Compounds, S-W Lime Sulfur Solution and S-W Bordeaux Mixture).

For vegetable spraying particularly S-W Paris Green and Tuber-Tonic will produce corresponding results.

A post-card will bring you our 124-page illustrated book, "Spraying, a Profitable Investment," and a folder describing our new Combination Potato Spray—Tuber-Tonic.



THE SHERWIN-WILLIAMS Co.
Insecticide and Fungicide Makers
675 Canal Road, N. W., Cleveland, O.

When you write advertisers
Please mention Green's Fruit Grower.

Courting an Orchard for Profit.

Written for Green's Fruit Grower by
John E. Taylor, Maine.

There is a man in Somerset County, Maine, who has found beyond any doubt that pruning and cultivating an orchard are as essential to profits as the picking of the fruit.

This man moved onto the farm about 15 years ago. There were 1500 Baldwin and Greening trees in the orchard that were then 25 years old. It was evident that care had been used in setting them out but the first year that he took this farm the orchard bore only 25 barrels.

The next spring he trimmed the orchard, pruning all the dead and superfluous limbs. The next year, though the year was only fair for orchards, the orchard bore 50 barrels or doubled the number of barrels of the year before.

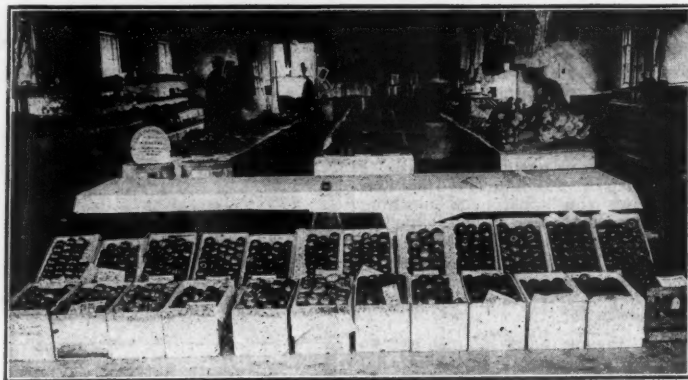
This man was not satisfied with this. That summer he bought 25 hogs and put them in this orchard and they rooted the old dead sod up around the trees. That fall he plowed between the trees and left the hogs in the orchard until late. In the spring he harrowed the ground thoroughly and planted potatoes, using about a ton of fertilizer to the acre. The following fall the orchard produced 80 barrels of salable fruit.

That fall he plowed the orchard again and while the snow was on the ground in

in growing apple trees, and that pests were bound to live in their trees, now have begun to treat their orchards in a business-like way cutting the fungus growths from them, spraying the trees, pruning and working for better fruit.

When the special prize was given the State Horticulturist was employed to act as judge on the exhibits. This gave the farmers an opportunity to inquire of this judge why he had awarded the prize as he did and how perfection might be attained in fruit growing by other farmers. As a further stimulus this fall there were ten business men in Somerset County that each gave ten dollars for the best box of apples in a given variety of ten kinds. The results were pronounced. The judge of these apples stated that the show had the best apple exhibit of any fair in Maine that he had attended this fall.

Premiums were given on Ganos, Baldwins, McIntosh Reds, Northern Spies, Starks, Kings, Wealthies, St. Lawrence, Rhode Island Greenings and Farmer's Rewards. The exhibits were full and prizes were awarded upon each variety. This method has had more influence of increasing the interest in better orcharding than anything else in many years. It has shown to the farmer that in order to attain profits from an orchard, it should have care and cultivation.



This photograph, by John E. Taylor, of apples exhibited at a country fair in the state of Maine, where special premium of \$10.00 for each variety was offered. This method has had a tendency to arouse more interest in better apple growing in Maine.

the spring and was thawing days and freezing nights, he sowed the orchard to clover. In the fall he plowed in the crop as a dressing.

It is not strange that under such treatment as mentioned the orchard produced a bigger crop. But it all paid and now this orchard is bearing about two and one-half barrels on an average a tree each year.

The result has been that the farmers who before thought luck was against them

GROWING APPLES FOR THE FRUIT SHOW.

Going after the perfect apple is the aim of many of the orchardists in Maine at present and the stimulus has been that the various county fairs are now offering ten dollar prizes for the best box of apples of any standard variety.

Two years ago, Dr. George Otis Smith, a native of Somerset County and now director of the United States Geological Survey, gave as a special premium ten dollars at the County Fair for the best box of apples that might be exhibited. This was something new for the farmers of this county, and the exhibits were considerably small for this prize. It was finally won by one of the biggest orchardists in the county. This led to inquiries how this farmer cared for his orchard. His explanation though simple gave the small orchardists something new to think about and has had a wonderful effect in this county in producing better fruit and giving more attention to the orchards.

The method used by this prize winner of this special premium was in effect as follows: He has owned an orchard for 25 years. His aim has been to thoroughly cultivate between the rows of trees, use plenty of dressing as fertilizer, plow in at least every two years a cover crop such as clover and buckwheat. He has pruned his orchard at least once a year and has sprayed his trees at least twice a year, and the result has been his apples have been good shape, free of worms, and the care that he has given his orchard has given the tree vitality to grow its fruit for size, shape, and even flavor.

APPLE GROWING IN THE EASTERN STATES.

The fact that a representative of Green's Fruit Grower, Mr. R. E. Burleigh, our business manager, was fortunate enough to be present at an exhibition of fruit held in Boston, September 14th, gives me much pleasure. I have asked Mr. Burleigh to report in full what he saw at this exhibition. He was astonished at the marvelous display of fruits. Mr. Burleigh has been fortunate enough to see some of the largest exhibitions of fruit ever made in this country. He was at the continental display of fruits made in New York City about one year ago, when car loads of the finest apples grown in the middle west or along the Pacific Coast were exhibited as compared with those of western New York and every part of this country. He tells me that he never saw finer apples exhibited than those from the eastern states, that is from Massachusetts, Vermont, New Hampshire and Maine.

We have as American citizens gloried in the superior fruits grown in the west, middle-west and on the Pacific Coast.

These western apples have produced wonderful results, and have advertised their section far and wide, while scarcely anything has been said about apple growing or other fruit growing in the states east of New York state. We in western New York have done what we could to sustain the reputation of this famous section which we think is not beaten the world over. It would seem now to be high time to exploit our sister states to the east and report their success in fruit growing. These eastern states have every advantage over the orchards that are 3000 miles distant in the west, for the eastern states are at the very doors of the markets of Boston, New York, Philadelphia, Baltimore and other lesser cities within their own confines. Remember that the apple is a northern fruit. It thrives better at the north than at the south.

Our eastern states have many hill farms, and it is the hill farms that produce the finest fruit in the largest quantities. Many of these eastern farms are rocky and sometimes occupied by stumps. These apparent defects need not prevent the planting of an apple orchard where apples succeed. I shall plant a steep slope on the new farm that I have purchased, where plowing cannot readily be done. I will furnish a sod mulch for the young trees by turning over the sod at a distance as wide as the feeding roots extend, and shall expect to secure a profitable orchard without other methods of culture than sod culture and mulching. Such orchards can be secured on rocky soil and on the soil filled with stumps in the eastern states.

Florida Strawberries Shipped to the North.

The first strawberries of the season, two carloads, left here to-day for Chicago. The farmers netted 75 cents per quart.—Plant City, Fla.

What is believed to be the largest single shipment of vinegar ever made, consisting of a solid train of fifteen cars, was sent recently from a factory in Paris, Texas.

For sowing seeds in perfect geometrical figures, a perforated roller, through the holes in which the seeds drop, has been invented.

He Planted a Hardy Dwarf Pear Hedge.

Green's Fruit Grower:—In answer to your question, Have you followed my advice, we ordered 150 dwarf pear trees which were delayed by the flood so that when they arrived in April we found the trees blooming in the box. After preparing the soil with care the trees were set three feet apart all around the walks and driveway. We have thrown the soil up to the stems, forming a ridge, which has been kept loose and free from weeds and grass. All the trees are doing well, not a single one is missing. Next spring we intend to cut the tops off. We hope to set out a hedge of dwarf peaches in March or April.—Jacob Graf, Indiana.

ANOTHER DWARF PEAR HEDGE.

Editor of Green's Fruit Grower:—On Nov. 1, 1910, I planted a pear hedge of 20 dwarf pears three feet apart. This year five of the trees bore fruit. I am well pleased with the experiment. Next year I look for quite a crop from the hedge. I am delighted with the Fruit Grower. I have a half block of fruit garden and am after every new fruit.—C. W. Keifer, Kansas.

STILL ANOTHER.

Dear Mr. Green:—I am one of the subscribers to Green's Fruit Grower who accepted your advice twelve years ago and planted a hedge of dwarf pear trees around my garden in New Mexico. I bought 120 pear trees. They have lived and have been bearing fruit abundantly every year. I would not take \$1000 for these 120 dwarf pear trees, planted three feet apart in the row, ample space being given on either side for sunshine and ventilation.—Chas A. Siringo, New Mexico.

Straw Mulch in Orchards.

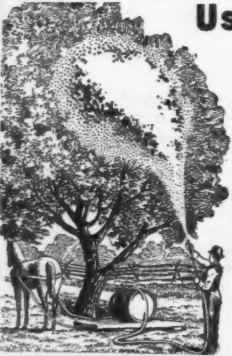
A practical fruit grower, who does some useful experimenting tells of his experience in the use of straw for orchard mulch as follows:

Eight tons of straw, costing at the rate of \$9.50 a ton, were used. About twenty five trees were left unmulched for comparison. The fall was very dry, there being but very little rain from the middle of August until December. The mulched fruit was increased considerably in size and the percentage of first grade fruit increased about fourteen per cent. by the use of the straw. As a result of the better appearance and higher grade of the mulched fruit, it is estimated that it would bring twenty-five cents more per barrel than the unmulched fruit.

Little Rock, Ark., October, 1913.

Green's Fruit Grower Co.:—We received your October issue of Green's Fruit Grower the first of the week. It seems to be better and better all the time.—Frank Busch.

More than 100,000 Farmers and Fruit Growers Use the Standard Spray Pump



With it they spray their tallest orchard trees from the ground in half the time required by others. The knapsack attachment enables them to spray their potatoes and low growing crops at the rate of an acre an hour or better. They white-wash their barns and chicken coops and spray "dip" on their live stock with the Standard Spray Pump.

Made throughout of brass, with nothing to wear out or break, the Standard Spray Pump lasts a life time and pays for itself over and over again.

Warranted 5 Years. Price \$4 Prepaid. (West of Denver \$5.) Money back if not satisfied.

Send no money but write today for our Special Offer and Catalog B.

The Standard Stamping Co.
348 Main Street, Marysville, Ohio.



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SPRAY with an ANTI-KLOG

They give the highest efficiency through long hard terms of service. There is an Anti-Klog of the right capacity for those who have much and those who have little spraying to do.

They spray better—spray better longer—and represent more downright sprayer value—than any other spraying devices manufactured.

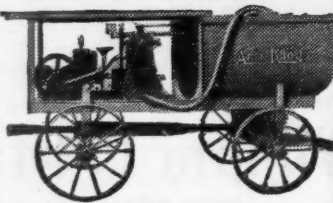
Ease of operation, simplicity, strength and a number of other individual features appeal to every user. The Anti-Klog nozzles make it very difficult for any mixture to clog the outlet.

Guaranteed for 5 Years

You are absolutely protected when you buy an Anti-Klog, as each one is sold under an unqualified guarantee of 5 years' service. Send for our new free catalog and give your dealer's name. You should now make preparations for spring spraying.

ILLINOIS METALS COMPANY
2411 West 22nd Street

CHICAGO, ILL.



ONE APPLE FOR EACH MINIMUM. For Proper Celebration of National Apple Day.

"The primary purpose of Captain James Handley, of Quincy, Ill., the founder of the national Apple Day, was educational and to foster apple culture. Since then, through the efforts of the International Apple Shippers' Association, growers' organizations and commercial bodies, the purposes of the day have broadened.

ENCOURAGING APPLE EATING.

"Not alone is production now considered, but the equally important element of consumption is emphasized. Schools in many sections have devoted a part of the day to special articles and discussions on the apple. Special sales are held. Attractive displays are made. Hotels and restaurants make the apple prominent on their menus. The poor, the orphan asylums, the hospitals, will be remembered by gifts of this attractive fruit."

"How should Apple Day be celebrated?" Mr. Phillips was asked.

"To celebrate the day properly one should eat at least one apple, and as many more as possible. It is a day when the householder should begin to think of laying away a few barrels of Spies, Spitzenbergs, Baldwins and other varieties against the cold winter nights when, with friends and family about, the rosy-checked apples will open the channels of sociability."

SIZE OF APPLE CROP.

When asked regarding the extent of the apple crop in this country and whether it would last if everybody ate several apples on Apple Day, Mr. Phillips said:

"Few people realize the extent and value of the apple crop of the United States. It is a national fruit, raised all the way from the mountains of Georgia to Maine, and from Maine clear across to Los Angeles, in California. Even the state of New Mexico this year produced 1,200 cars of commercial apples. The American apple crop is not only the largest fruit crop in the country, but it is the most valuable crop in the world.

"If the apples raised in this country were made into a wall twelve feet high and eight feet wide the wall would extend from New York almost to Chicago. If the apples were placed end to end they would extend more than 300,000 miles, or would make a double track six times around the world. If the apples were packed in barrels and the barrels piled end on end, the top would be more than 6,000 miles above the earth, so you see that there will be plenty of apples to go around no matter how many we eat.

WESTERN NEW YORK YIELD.

"Will there be enough apples in this section of the state to go around?" Mr. Phillips was asked.

"In Western New York the commercial crop alone will mean substantially, \$7,000,000 paid into the hands of producers. The value of the total crop of all grades in the United States will probably be not far short of \$100,000,000. This helps materially in the battle for prosperity.

"At present there are at least 100 apples in sight for every man, woman and child in the United States, and of better quality and larger size than usual. It is hoped that everyone will begin the day and year right by consuming at least one apple Tuesday and thus make a small start of his share of 100. That is the way to observe the day. At the same time, don't forget your friends. Let the children have apples. Put one in the lunch basket. Decorate the table with apple sauce, apple pie, apple dumpling and baked apples."

The Apple Supply Decreasing.

Judging by statements made by experts who have studied the apple situation in this country, the only thing that stands in the way of securing a fair price for all the apples we raise is an efficient system of marketing the crop, says Democrat and Chronicle. While the population of the country is steadily growing, and the popularity of the apple certainly is not declining, the number of bearing trees grows steadily less. Dr. J. H. Funk, a horticultural specialist, of Berks county, Pa., states in a recent article that while there were 200,000,000 bearing apple trees in this country fifteen years ago, the number has been reduced to 150,000,000 by the San Jose scale and other pests, and by fungus diseases, and is still decreasing. More than that, not one tree out of every twenty planted ever reaches profitable maturity. With this condition of affairs, obviously orchardists have only to reach the consumer to insure themselves against low prices. Maybe the parcel post will assist in the solution of this problem.

Canada has appropriated \$10,000,000 to cover a period of ten years' instruction and research in agriculture. The fund is to be distributed among the provinces according to population.

Mice in Young Orchards.

One of the destructive pests that the owner of a young apple orchard has to reckon with is the field mouse. It is commonly supposed that they are to be feared only in winter after deep snows have fallen, and the animals in search of food find the succulent bark of the young apple tree near their nests or burrows. But the experience of the past season has taught me that they may girdle trees at any time of the year if circumstances favor them, says American Cultivator.

What did the thirsty and famishing rodents do but make the mulch their shelter and home and form their nests and burrows under it in the ground. In August, when looking over the trees, I discovered a number of them girdled, some completely so, and immediately I put elm-veneer wrappers around them all, covering the wounds with grafting wax and heaping dirt around them. The hard, dry, elm-wood wrappers would seem to be a safeguard against further depredations, and they did protect most of the trees, for the tarred ends of the wrappers are well pushed down into the soil. But some of the more sagacious mice were not to be fooled by the wrappers, and burrowed under them down to the roots of the tree and fed on the juicy bark, and even ate the wood of the smaller roots.

This proves that mulching in a very dry season has its peculiar dangers. As no rains had fallen on the ground to compact it since it was first loosened up, the mice, protected by the mulch, could burrow at their leisure and feed on the roots without being discovered.—A. E. Vandervort.

The Apple Crop.

This is an off year for apples. The crop is short, both in this country and abroad. Probably, therefore, less will be heard than usual about apple "over-production"—the complaint that is usually heard in apple raising regions when the price drops to two dollars or less a barrel and when fruit remains ungathered in the orchard. The chief trouble with the American apple crop, whether it is large or small, is the poor system of distribution. The apple is a fruit of so many virtues that such a thing as too big a crop is almost an impossibility in this country. The people like apples and would eat millions of barrels more. The trouble comes in getting the apple from the orchard to the city consumer—a trouble not confined to apple distribution, but apparently worse in the case of apples than some other commodities.—Boston Herald.

The Okanagan United Growers, Ltd., of British Columbia, have just contracted for the export of 30,000 boxes of apples to Australia, on the basis of \$1.40 per box f. o. b. Okanagan points, says the Watsonville Pajaronian.

FREE

Pouch is 3 1/4 x 3 in. size.

No matter what tobacco you are now chewing, if you will try PIPER Heidsieck you will become a permanent user of this famous tobacco. To induce you to make a trial, we will send you free, this genuine leather

Tobacco Pouch

Strongly made of fine tan leather with a flap and patent snap clasp. Every man who loves a good chew will prize this handsome, handy leather pouch to carry his tobacco in.

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CHEWING TOBACCO (CHAMPAGNE FLAVOR)
Sold Everywhere in 5c and 10c cuts

PIPER Heidsieck is the highest type of chewing tobacco in the world. Every leaf of ripe, golden brown tobacco used in "PIPER" is carefully selected from Nature's choicest crops, clean, sweet and mellow. The flavor of "PIPER" is different from all other tobaccos made—a rich, wine-like, delightful taste which never fails to make a friend.

We Want You to Try PIPER Heidsieck

Send 10 cents and we will send a full-size 10c cut of "PIPER" and this handsome leather pouch FREE.

The tobacco, the pouch and mailing expenses will cost us 20 cents—and we are glad to spend the money to get you to try "PIPER" just once.

We know that once you have started, you will become a permanent friend of this wonderfully wholesome, healthful and satisfying tobacco.

In writing us please tell us the name of the dealer of whom you buy your tobacco.

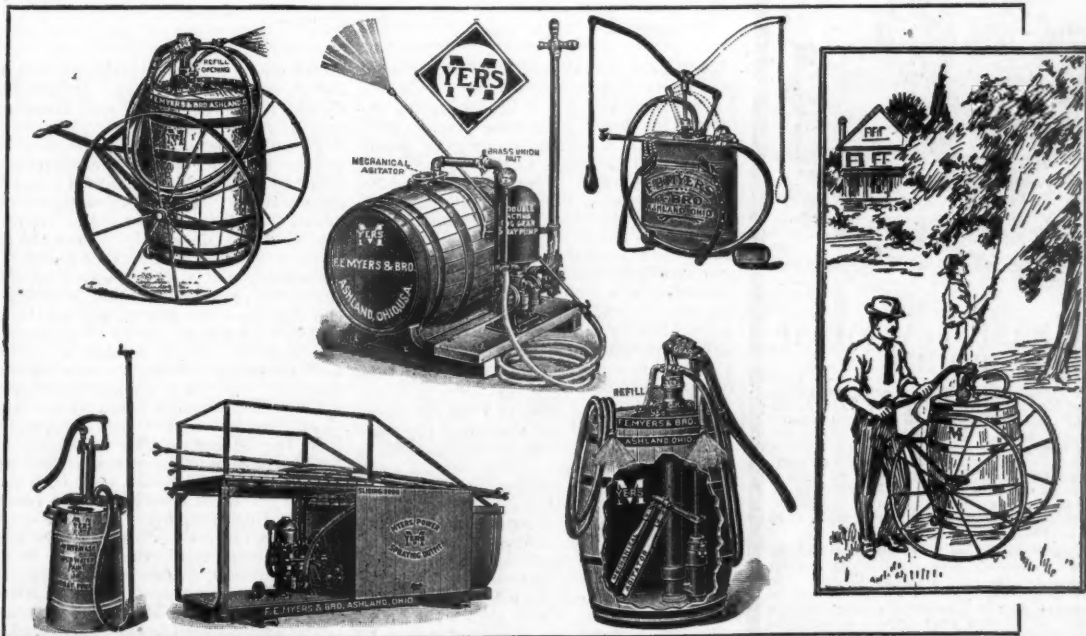
THE AMERICAN TOBACCO COMPANY
111 Fifth Avenue New York City



MYERS SPRAY PUMPS

Bucket, Barrel and Power, Insure Successful Spraying Operations.

No matter how large or small your orchard or vineyard, no matter how long you have been spraying or how much you have heard or talked about it, it will be to your advantage to investigate MYERS SPRAY PUMPS before another spraying season arrives. Spraying, to be successful, must be correctly done. Slipshod, careless methods, with a cheap, undersized outfit, are expensive—a loss of time, a waste of material and often loss of fruit crop and damage to trees and foliage.



It Pays to Spray Myers Way—with a Myers Bucket, Barrel or Power Outfit—according to your requirements. It's effective and efficient spraying and productive of results every time.

Illustrations appearing above show a few Myers Outfits—ready for operation. Many additional styles with a complete line of proven Nozzles, Hose, Fittings, etc., are illustrated and described on our Catalog No. SP13—Ask for a copy by return mail with name of our nearest dealer—in time to be prepared to spray "MYERS WAY" next spring.

F. E. MYERS & BRO. 150 ORANGE STREET, ASHLAND, OHIO.
ASHLAND PUMP AND HAY TOOL WORKS.



NATURAL HEN INCUBATOR \$3
No freight to pay. Actual hen controls everything. No lamps, no expense, no costly mistakes. Over 600,000 sold. Thousands of testimonials. Agents wanted. Free Catalog with Special Introductory Offer. Natural Hen Incubator Co., Sta. 11, Dept. 9, Los Angeles, Cal.



Greider's Fine Catalogue
and calendar of pure-bred poultry for 1914, large, many pages of poultry facts, different breeds in natural colors, 70 varieties illustrated and described. Incubators and brooders, low prices of stock and eggs for hatching. A perfect guide to all poultry raisers. Send 10c for this noted book.
R. H. GREIDER, Box 44 Abbeville, Pa.

BLACK, WHITE AND BUFF COCHIN BANTAMS

OF THE BETTER SORT.
Very fine youngsters in each variety at reasonable prices. A few pairs at \$3.00 each, while they last.

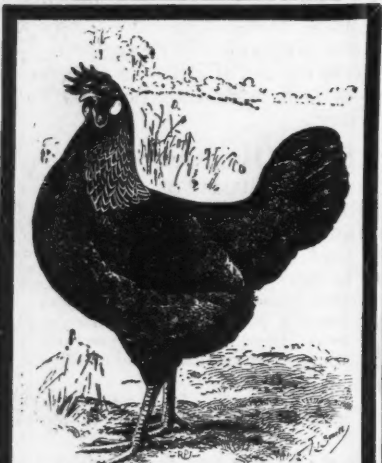
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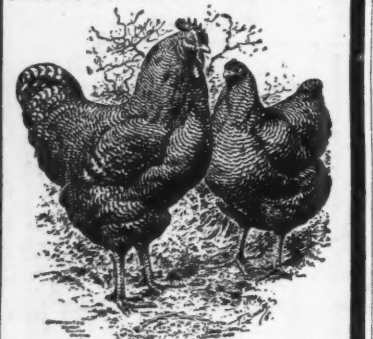
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Coughs, Distemper, Indigestion,
NEWTON'S Large for Heaves.
At druggists or sent postpaid.
THE NEWTON REMEDY CO., TOLEDO, OHIO

Make \$30 a Week
New gas-generating coal-oil lamp
Burns common kerosene. Absolutely safe.
300 Candle Power
Light it and make a sale. Literally, millions can be sold. Every home, city or country needs it. Enormous profits on every sale. \$30 a week easy. Low retail price. Attractive terms to agents. Write quick for territory and 15-day free trial offer if you mean business.
THOMAS LAMP COMPANY
970 Line Street DAYTON, OHIO



SINGLE COMB BROWN LEGHORNS

The Popular Leghorn.—The acknowledged queen of the practical egg-laying breeds is the Leghorn, when judged by the standard of the greatest number of marketable eggs produced at least cost. Not only are the hens persistent layers, but they are extremely active foragers and waste no time in setting. Like a good milk cow they put little fat upon their bones, but devote all surplus nourishment to steady production. Price of Single Comb Brown Leghorns: Male Birds, \$3.00, \$5.00, \$10.00 and \$15.00; Females, \$2.00, \$2.50, \$5.00; Trios, \$6.00, \$8.00 and \$10.00.



BARRED PLYMOUTH ROCKS

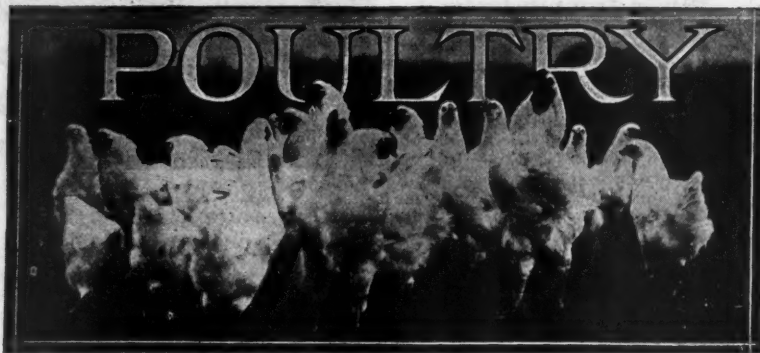
This breed is as solid as its name, and is often called the "Farmer's Friend," the "All Round Fowl," the "Old Reliable." It is the bird for business, and deemed by many the best fowl for farm and home raising. It is not only a good layer, but is quick to develop for the early market. As a far-sighted farmer once said to us: "When you kill one you've got something." Price of Barred Plymouth Rocks: Cockerels \$3.00, \$5.00, \$10.00 and \$25.00; Pullets, \$2.00, \$2.50 and \$5.00; Trios, \$6.00, \$8.00 and \$10.00.

We ship no cull birds. The lowest priced birds offered are standard bred, practically as good for breeding purposes as the higher priced birds. The \$5, \$10 and \$25 birds offered are the pick from the flock containing the largest percentage of standard points and therefore commanding a higher price since it makes them eligible for show purposes.

PRICE OF EGGS FOR HATCHING FOR ALL BREEDS:

From good breeding pens, \$2.00 per 15; from our best breeding pens, \$3.00 per 15. While we do not guarantee the fertility of our eggs we are willing to replace all settings from which the purchasers receive less than six chicks, at half the price paid.

Green's Nursery Company
Desk P, Rochester, N. Y.



How to Manage an Incubator.

Written for Green's Fruit Grower by
J. S. Underwood, Illinois.

Incubators need careful management, as any neglect is attended by non-success. It is most necessary that each part of the machine be understood, and it is a wise plan, if it is possible, to ask the manufacturer or his agent to explain its mechanism, and to start it working. If this cannot be done, the rules and regulations that accompany the machine should be carefully read, while each part of the incubator be closely examined.

It is an unwise investment to buy an incubator just because it is cheap, for it never gives as good results as one that is made of well-seasoned wood, with the latest improvements. A perfect machine is one that imitates nature closely. For a novice, a fifty-egg incubator is sufficiently large, as the initial attempt at artificial incubation is rarely fraught with success. Those fitted with patent egg-turning arrangements are highly commendable, as they permit of the eggs being turned with the minimum of trouble.

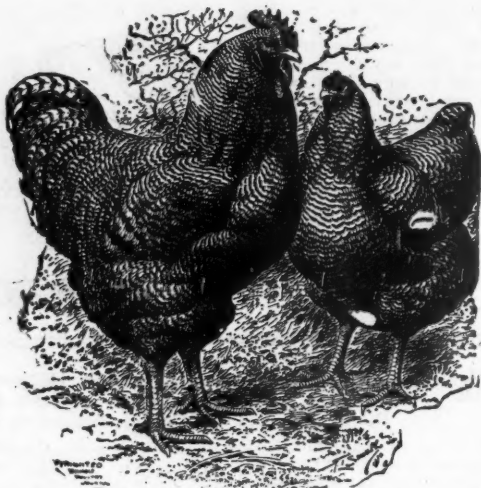
Some incubators are not provided with damping trays. This sometimes proves a mistake, as the supply of moisture required depends, to a great extent, on the

All eggs placed in an incubator should be quite fresh; where it can be managed, they should be put into the incubator the same day they have been laid. They may be two or three days old, but the most successful results are obtained from newly-laid ones. The eggs selected should be of an even size; very small or very large ones should not be chosen, as they often prove unfertile.

When the incubator has been properly heated the drawer should be filled with the eggs and placed in the machine. The lamp must be kept burning steadily and the temperature maintained at about 103 degrees. This is the correct heat for incubation, and it should not be allowed to vary more than one degree either way. Night and morning the eggs must be turned.

The lamp needs daily attention; the wick will be found to require trimming, and the oil-container will need more oil. Each day the eggs should be aired, ten or fifteen minutes being allowed, as if more time is given it takes too long to get up the proper temperature again.

After the eggs have been in the incubator for a week, they should be tested to see if they contain a developing germ. Hold a lighted candle behind each egg; an infertile egg will be found to be abso-



Barred Plymouth Rocks.

place where it is at work. If it is placed in a damp atmosphere no extra moisture will be required; but if kept in a dry atmosphere, it will be a wise plan to provide moisture, or the membrane inside the shell of the eggs will get tough, and the chickens will experience great difficulty in pecking their way out. A drying box for the chickens when hatched is essential. There are other points with up-to-date machines, and almost every manufacturer has his own particular improvements, which are explained to purchasers. Usually a good firm will sell an excellent incubator, and it will be wise to buy one that has been used with success by well-known poultry farmers and that is reputed to be highly efficient.

To obtain good results from an incubator, care should be taken that the temperature of the place where the machine is kept does not vary. To secure an even temperature it is a good plan to place the incubator in an outhouse; this should be locked up, thus preventing the opening and closing of the door as much as possible. The building should be well ventilated at the top, and be free from draughts. The machine should be placed in the middle of the house, as this allows the air to circulate around it; it should never be put in a corner or against a wall, as fresh air is essential during the process of incubation. The incubator should stand either on a low form or on the floor; this allows the heat inside to be regular. If the egg-drawer is but half an inch lower at the front than the back, the front will not be as warm as the back. It is important, therefore, to keep the machine perfectly level.

lutely clear, while a fertile egg will have a dark spot in the center. Infertile eggs should be taken away, and fresh eggs, carefully dated put in their place.

To warm the eggs before putting them in the machine keeps the temperature even; to place cold eggs into it lowers the temperature. It is necessary to make use of the damping tray if the weather is dry, or if the place is dry where the incubator is kept. On the other hand, if the machine is placed in a damp atmosphere the damping tray must not be filled. If the chicken is too wet on leaving the shell there has been an excess of moisture; if the toughness of the membrane inside the shell prevents the chicken leaving easily, there has not been enough moisture.

When the chickens begin to hatch they should be left alone; they will need no food for 24 hours after hatching. The first meal should be composed of bread crumbs and hard-boiled egg; this should not be given till they have been removed to the foster-mother. If these suggestions are followed there is every reason why artificial incubation should be a decided success. Of course experience counts for a great deal, but even a beginner will find that after a few attempts (even unsuccessful ones) things will turn out well, and subsequent attempts will well repay his care and attention in the earlier efforts.

Edwin's Destiny.

"Where's Edwin?" asked the rooster. Said his wife, "I've got a hunch That Edwin's now fried chicken, for he's just gone in to lunch."

—Dallas News.

Poultry Notes.

Drafts cause colds, and colds cause roup, and roup usually means death.

The hens can get neither worms nor bugs during this freezing weather. A bit of meat would taste pretty good to them now.

Incubators and brooders should be overhauled now and placed in good order for the early hatching season.

A shelf a couple of feet below the roosts is handy to catch the droppings and handy to clean. And don't forget to clean it.

There is still a belief among some people that hens mated will lay better than those unmated.

Important qualifications in a hen are that she shall be a good feeder, bright, clear-eyed, quick in action, clean and not scarey.

Most of the diseases of the feet with poultry are caused by having the roosts so high that the fowls are obliged to jump down some distance.

There is no sentiment in a hen. Her only object in life is to get enough to eat. If she is given that and a warm, well ventilated house to sleep in at night, a dry, sheltered place in winter, she will do the rest.

That it will pay the average poultryman to trap-nest his flock in fall and winter months, and breed from the pullets which lay earliest in life, as well as from the pullets and hens which lay in the winter.

Limber neck is simply paralysis of neck muscles caused by several things—poison imparted by rotten meat, maggots, mold, worms and even acute indigestion.

Bleeding under the left wing is an old-time remedy for limber neck. Fifteen drops of nux vomica in one pint of drinking water has often effected a cure.

During cold weather, all prepared chicken foods such as mashes and boiled vegetables, should be salted in about the same proportion as for human food. If this is done, the poultry will be both healthier and more productive.

Dampness in the poultry house at this season usually means not enough fresh air or too many fowls in the house (not enough cubic foot air space per bird). An overdamp coop is a favorable place for the development of colds and roup.

During the winter months the drinking vessels should be emptied each evening to prevent the hens from filling up on cold water in the morning. The fresh water from the faucet is much warmer than that standing in vessels over night and we find it makes quite a difference in the egg yield.

For winter feeding of green stuff rely largely on mangels and other roots, and to some extent on pumpkins and squashes. Mangels and the overgrown table beets gathered in the fall and stored in the vegetable cellar are particularly useful. Every poultry keeper ought to have a patch of mangels, of suitable size, in his garden. Sprouted oats in winter furnish the desired green food while the grain has a nutritive value.

Dry forest leaves form an excellent article for putting in the poultry scratching shed, and make a fine fertilizer for the fields after being used.

The hens will stand severe still cold much longer than simply frosty wind. Cold is never so hard on chickens as rains and wind. Sneezing, sniffing and gaping will often set in for the flock after a wetting from a cold rain, or shivering about in a frosty wind. This is why every chicken house should be furnished with a scratching shed adjoining it, and one you can shut up on rainy, windy days, or when the weather is severely cold. Keep the scratching shed deep in clean straw or clover or alfalfa hay, but don't leave it until it gets damp under their feet, and soggy.

Extent of Egg Exports.

While the total number of eggs produced by the domestic hen in this country during the last fiscal year has not been compiled by the Agricultural Department, some faint idea of the enormous volume of the output can be gained from the fact that the customs reports show that 121,000,000 dozens were exported to foreign countries in the twelve months. It would be reasonably safe to estimate that the egg crop closely crowds the corn crop, or would if accurate returns could be obtained of the number consumed in the families of the farmers. The quantity exported has rapidly increased in the last twenty years, and the entire product doubtless increased in proportion. It is reported that in 1903 the value of hens' eggs exported was \$33,297, and in 1913, \$4,391,653. The hen is coming into her own.

Green's Fruit Grower Co.—I will say that I have much enjoyed reading Green's Fruit Grower; its sanity on all questions regarding the social order; the clearness of its counsel and the strenuous advocacy of the merit of rural life, have pleased me greatly.
—Rev. Bernard Copping, N. H.

January Poultry Pointers.

Written for Green's Fruit Grower by Earle William Gage.

The dairy cow and the flock of hens will do more real financial good for the farmer of the Central West from now on than ever before in the year.

Have you tested any eggs yet for fertility? Never sell eggs for hatching purposes until you are able to hatch them yourself.

This is a good month to mate up the breeders. Be sure to give health, vigor and vitality first place in making the choices.

Don't expect too much from the hen hatchings. After careful investigation, the average result was reached as six chicks from thirteen eggs set.

Feed good, sound Indian corn during this cold weather, as it will prove the best as a relish staple grain. Get the best corn and feed all that the fowls care for, no more. Indian corn is a good food for flesh, eggs and sound bodies. Corn-fed poultry is usually mighty good poultry.

Feed the breeders for health, and see to it that they receive an abundance of wholesome food, and that they are housed in well-planned open-front houses. These little items will drive away many a poultry-trouble a little later.

Put the roosters with the breeders two weeks previous to the incubation. Hatchings should start February to March. The earlier the stock is hatched, the more fall-layers you will have, and the higher prices you will receive.

Don't pay any attention to that old saying that eggs for hatching should be turned every day. As a matter of fact they are better when left untouched. The more the egg is handled the less chance we have for good results. Merely place the eggs to be incubated in a cool, clean, airy room in a basket or box and leave them alone till needed. Thirty-six to forty-eight hours after placing them in incubator, the eggs will need turning twice each day. It is better to roll them than to turn them. After the first ten days the eggs should be rolled from one position to another more often than at first for best results. If the eggs are placed under the hen, never trouble your mind about moving them. She performs this task herself.

Look the poultry advertisements over carefully, send for catalogues, and order that incubator, however, brooding-house, and other items that you will need. It is poor policy to order the day before needing. Order six weeks in advance, for railroads are slow and sure to deliver the goods.

The Hen's Dust Bath in Winter.

A box of fine road dust should be kept within easy reach of the hens every day in the year when there is no dust in the yards for the hens to wallow in. Of course, hens on free range in summer and fall will usually find an unlimited supply of dust ready at hand, or at most all we need to do is to spade up a place if the soil in the yard is hard. But we sometimes forget at this season when the dust is plentiful that the fowls will not have this in winter unless we make ample provision for it in due season. The dust bath is just as essential in winter in keeping the fowls free from lice as it is in hot weather. Lice thrive and multiply in winter as well as in summer; not so rapidly, of course, yet fast enough in the average poultry house to make life a torture for the hens if nothing is done to keep the insects in check.

Henhouses in Cold Weather.

By nature hens are wild fowls. Shutting them up is an invention of men. It works with hens just as it does with human beings. They grow weak as they become more highly civilized, settling down in close houses. To do their best, hens—and men—ought to have plenty to do every day, says E. L. Vincent, in Wisconsin Farmer.

This makes it necessary to have our henhouses large enough to give the hens confined there room enough to move about without stepping on each other's toes. Overcrowding is one of the causes of failure with poultry. Winter is the time when this is most apparent. In warm weather the birds are out around, picking up food and giving their bodies the needed exercise. This keeps them healthy.

But how soon they begin to sneeze and dump around after they go into winter quarters—unless we attend closely to the space they occupy and the food they are given! Ventilation, either through air shafts in the roof or windows so arranged that no drafts come on the birds, must be provided, night and day. We greatly underestimate the value of good, fresh, pure air.

And then we cannot afford to neglect a good, old-fashioned, all-round bill of fare. It is not necessary that they have quick-knacks. These are on the market and are recommended by some. Give me good corn, wheat, wheat feed, bone meal and grit, with as much milk as they will take.

Not one man out of a dozen in the country has a shed where the birds can work and dig for dear life. We will some day get beyond this narrow view of things and provide such places. They need be little more than a roof with sides shut in fairly well, furnished with plenty of big windows and a floor adapted to the work to be done. Most of folks have written about the duty and the necessity of keeping the houses clean, until the average reader passes this advice by. Let me be an exception to the rule and simply say that whoever neglects to clean up, and do his best to stay clean, will never do very well with poultry, and the chances are that he will make a miserable failure.

Care and Feeding for Winter Eggs.

Editor of Green's Fruit Grower:—After trying a number of different methods in caring and feeding for winter eggs, this has proven very successful.

The first thing, one must start with the fixed idea in mind of producing birds that are strong and hardy, so they can stand the strain of forcing for eggs and the drain on their systems constant laying will tax them with. The chicks must be hatched early in the year. March and April are exceedingly good months for Leghorns, as they mature very rapidly. At this time of the year, eggs should be better fertilized and assure a better hatch of stronger chicks than in January and February; also much cold, bad weather will be avoided.

During the entire growth, keep constantly in mind the object of your endeavor; eggs.

As soon as the chicks are old enough to be weaned from the brooder and transferred to colony houses, which should be



The type of Barred Rock females grown on Green's Poultry Farm.

from six to eight weeks, consideration being given to time of hatching and their growth, get them out on free range where they will have every advantage in developing and growing strong hardy constitutions. At this time the birds must be well fed. They will pick up much animal food and all the green stuff necessary, but must have plenty of good, wholesome grain food in addition.

The young cockerels should be separated from the pullets just as soon as they can be distinguished. All of the birds will do much better. If it is possible to get the pullets in the laying houses and still give them the advantage of range until stormy weather, at which time they should be confined, so much the better, as they will be thoroughly accustomed to their home and contented. Fifty females to a flock is a plenty and they will do very well.

Have the floor of the house covered with twelve or fourteen inches of good loose litter, into which scatter grain. It must be dry so grain will settle into it well and make the birds work for all they get. Exercise keeps poultry strong and vigorous and is conducive to egg production.

The morning ration should be a good grain mixture with some variety. 100 pounds of coarse, cracked corn, 100 pounds of good hard wheat, 100 pounds of heavy white oats, 50 pounds of buckwheat and 30 pounds of sunflower seed will answer very well for the feed at morning and a very light feed of this grain may also be given at noon. About twice a week, feed two ounces of fresh ground green bone for each hen. Green food should be before the birds at all times. Cabbages and mangels hung up, and sprouted oats fed in a trough are the best of green stuffs for winter. A hopper of oyster shells, grit and charcoal must be kept always available, also fresh clean drinking water.

At night, feed a warm mash. Steamed clover, alfalfa, and occasionally potatoes, carrots, onions and beets. Mash the vegetables well and use enough of the liquid to moisten ground grain to a moist crumbly substance. 100 pounds of ground corn and oats, 100 pounds of wheat bran, 100 pounds of wheat middlings, and 50 pounds of beef scrap, is a good mash mixture. The beef scrap should be omitted and about 25 pounds of alfalfa meal used if green ground bone is fed.

With the proper houses, well ventilated and kept clean, you should have no difficulty in procuring an abundance of winter eggs.—M. E. Bacon, N. Y.

Cure for Limberneck.

My cure for limberneck in fowls is Epsom salts, a tablespoonful to ten fowls, given in soft mash. I also put it in their drinking water every few days through hot weather. I had one hen so badly afflicted with limberneck that she had no use of her limbs and body. I put about as much Epsom salts as would lay on a silver dime, in her throat, and next morning she was all right. The trouble is caused by ptomaine poisoning through eating putrid flesh.

The term "ptomaine" or "ptomain" is quite frequently used in public print these days. It is the generic name for certain alkaloid bodies developed from vegetable or animal tissues during putrefaction, or by disease-generating bacteria. Some of the poisons thus developed are extremely virulent. One of the most famous orchestra leaders of this day, Anton Seidel, of the Metropolitan Opera House, New York, lost his life, ten or a dozen years ago, as a result of ptomaine poisoning, supposedly by eating "fresh" fish in a New York restaurant. To cure limberneck in fowls, Epsom salts may be as good as anything. In fact, it is one of the few drugs which we would ever use for doping fowls. It is much better, however, to prevent ptomaine poisoning by carefully keeping the poultry runs free from decaying substances.—Practical Farmer.

When does an egg cease to be fresh? Investigation has proven that an egg remains in fresh condition for three days, says Farm and Field. Some farms ship eggs when a day old, to allow two-days' time for carriage and for the sale and this is a safe plan. As a rule, however, guaranteed fresh eggs are purchased the day they are placed on sale. Such eggs are for the fancy city trade. What are known as prime eggs in the trade are those of which the age is not known and may range from one to three weeks of age in cool weather. Fresh case eggs are a class out of which it may be expected to secure six good ones, three fair ones and three of demoralized order in each dozen. It seems that the market is always ready for good, bad and indifferent eggs. Of course, it goes without saying, that the stamped eggs are sold first and at an advanced figure for there is a special demand for them.

Mr. Chas A. Green:—I cannot tell you how helpful the Fruit Grower is to us. We rely on it for all our information as we are amateur farmers.—S. G. Burr, Carnegie, Pa.

Notes on Incubation and Brooding.

By Inland Farmer.

Have everything ready before hand and start your hatching operations early in the year.

A well ventilated cellar is the best place to operate the incubator.

The machine should be operated according to the manufacturer's directions. See that the incubator is running steadily at the desired temperature before filling it with eggs. Do not add eggs to a machine during incubation.

Turn the eggs twice daily after the second and through the eighteenth day. Cool the eggs once daily, according to the weather, from the seventh through the eighteenth day.

Turn the eggs before caring for the lamp. Attend to the machine carefully at regular hours.

Keep the lamp and wick clean.

Test the eggs on the seventh and fourteenth days.

Do not open the machine after the eighteenth day until the chickens are hatched.

Eggs saved for hatching purposes should not be subjected to high or low temperatures.

In cold weather place from 10 to 13 eggs under the hen; in warm weather from 13 to 15.

Always test the hen on china or nest eggs before setting.

Given proper care and attention, the hen is the most valuable incubator for the farmer.

Use insect powder freely to exterminate lice when necessary.

February, March and April are the best months for hatching.

If several hens are set in one room it is desirable to confine them in good nests.

Straw and hay make good nesting material.

Broody hens should be moved to the permanent sitting nest at night.

Whole corn is a good feed for setting hens. Water, grit and dust baths should also be provided.

All eggs should be tested by the seventh day, which often makes it possible to reset some of the hens.

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Timely Poultry Hints.

Written for Green's Fruit Grower by
Oliver N. Andrews.

Green bone is an excellent food for the hens, containing all the constituents that help to form an egg.

Repair the leaks in the roof of the poultry house. Their quarters should be free from dampness or else diseases can be expected.

It is a slow process trying to fatten fowls for market when they are given much range. Confine them in small quarters and feed all the grain they will eat.

Systemize your work around the poultry. Usually a little planning will save many steps. Keep the feed in some place near the houses. If possible, have the water supply near enough so plenty can be used without much labor.

Keep watch of the fowls' combs. In health, they should be a bright red. Pale or black combs indicate disease. Fowls should never be kept where it is cold enough to freeze their combs or wattles.

A thousand hens, if properly cared for will keep a good man busy nine hours a day. Such a number ought to realize a good year's salary. A dollar a head is a good profit under the average conditions.

Clover helps swell the profits of the flock, just as surely as it helps increase the flow of milk in the dairy herd. Plan for a good-sized patch next summer.

Save all the poor cabbages as well as the good heads. The hens relish them to good advantage during the cold months. They also like turnips chopped fine.

When going away for over night, get a trustworthy person to look after the poultry. It may mean a saving of many dollars. When night comes, the houses should be closed against all nocturnal enemies.

prove the fruit. Not near as much worm-eaten fruit will be found where the hens and chickens have a run among the trees. They eat much of the fallen and decayed fruit, also all the insects that caused it to decay, thus removing the danger of having other damaged fruit. Then on the other hand the poultry derives great benefit from having an orchard for a run. They have shade in warm weather, which is very necessary for all kinds of poultry, and the trees serve as a wind-break during stormy weather. Then the fruit and insects the hens have to eat, help greatly in balancing up the rations and reducing the food supply bill.

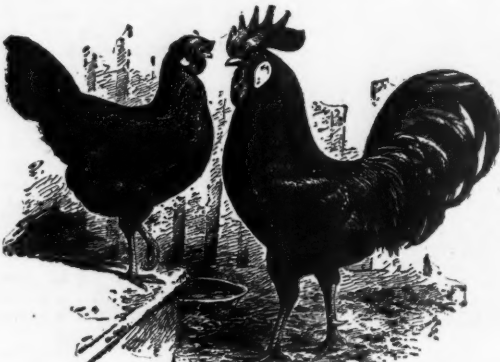
Fattening Poultry.

A hen on range seldom carries enough fat to put her in the first class as a market fowl. Before selling, the hens should be penned for a week or ten days and fed a special fattening ration, says the Indiana Farmer. A gain of a pound or a pound and a half can usually be made in ten days. The quality of the flesh also improves, a real fat hen usually commanding a premium of two or three cents per pound over the one in ordinary flesh.

The following is a good fattening ration: Three parts corn meal, one part each of shorts, ground oats and ground buckwheat, and ten per cent meat scrap. Mix well and wet down with skim-milk or buttermilk. Feed three times a day, all they will eat up clean in ten minutes.

Care of One Thousand Hens.

Can one person successfully take care of 1,000 hens and do all the work himself? A person can take care of 1,000 hens and do the work satisfactorily, providing the fowls are kept in large flocks in houses built properly with respect to ease of



Single Comb Brown Leghorns.

Table scraps from an average family will supply nearly enough animal food for a small flock, thus cutting down the feed bill. Every time the feeding expense is diminished the profits swell a little more.

We have heard the complaint of "no profit" in the poultry business. There is money to be made, but not without reasonable care and hard work. Fowls cannot care for themselves, although some flocks are not far from doing so.

It should be the aim of every poultryman to have a well filled egg basket or some other product for the market every time he goes to town. Small and frequent sales mean a whole lot in the course of a year.

Keep just enough cocks for breeding purposes and no more. Feeding several extra boarders through the winter means a dead loss. Fatten them and hustle to market unless they can be sold at good prices for breeding stock.

Do not take eggs to market piled into a basket like potatoes or several may get broken. If possible have a crate with cardboard partitions. Otherwise pack them in sawdust or bran, and they will travel safely over the roughest road.

Keep ahead of the game by purchasing needed breeding stock in the fall or early winter. Prices are usually higher in the spring when the demand is greater. Buy only from reliable dealers.

Unless the merry cackle of the hens brings a smile and quickens the pulse something is lacking. It is enthusiasm and a genuine liking for the work. The best results cannot be had with half-hearted efforts.

Any person interested in poultry cannot afford to be without at least one good poultry journal. Most of the best farm magazines have good poultry departments and there ought to be several in every home.

Sunshine is a necessity in the poultry business. Dark damp quarters will mean failure, no matter how good care is given other ways. Some farmers will keep hens in a filthy barn cellar and expect them to do well.

Poultry and Fruit.

Raising poultry and fruit makes an ideal combination. There is both money and pleasure in the business, says the Southern Fruit Grower. The fowls seem to im-

operation, says New York Farmer's Institute Reports. This would not include the labor of hatching and rearing chickens, nor would it necessarily include the packing and shipping of eggs and poultry to markets. Where fowls are kept in flocks of one hundred or more, and the modern labor-saving appliances are used, one man should be able to care for 2,000 hens so far as actual feeding of the fowls, cleaning the houses and gathering the eggs are concerned. However, on a farm where 1,000 hens are kept, usually two or three persons are employed to do all the work of caring for livestock and crops and marketing products. Much depends upon the kind of farming and methods of marketing, whether retail or wholesale, and whether eggs or stock are sold for breeding purposes.

Hen Droppings in Orchard.

A government bulletin says that "hen manure is very rich in fertilizing constituents, especially nitrogen, due to the fact that, in addition to the undigested residue of the food it contains, the urinary secretions, in which are large amounts of nitrogen as well as potash in readily available form, are voided with the solid excrement in this class of animals," says Rural Life. When the manure is not applied to the land and thoroughly incorporated with the land, when fresh, it is better to mix it with dry earth, muck or land plaster, which will hold the ammonia. Sand as such is but a poor absorber. The best way to apply the manure to the peach orchard would be to compost thirty pounds of it with ten pounds of sawdust or dry loam, sixteen pounds of acid phosphate, and eight pounds of kainit. This mixture carries about 1.25 per cent. nitrogen, 4.5 per cent. phosphoric acid, and two per cent. potash, which applied at the rate of two tons per acre, would furnish fifty pounds nitrogen, 185 pounds phosphoric acid, and eighty pounds potash. In your case, and if the hen manure is taken at once to the orchard and stirred in within a few feet of the trees, while barn-yard manure is used to cover the surface keeping it moist and supplying the needed potash and phosphoric acid, the best results should be obtained. Four or five pounds of hen manure applied once per year, should be sufficient for the trees.

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METHODS IN KEEPING EGGS. Sterile Eggs Less Likely to Spoil than Fertile Eggs.

By J. S. Abbott, Food and Drug Commissioner of Texas in American Food Journal.

Bread, meat, milk, butter, water and eggs are the most important articles of food. The Texas Food and Drug Department has therefore given much time to the sanitary and unsanitary methods of handling and the production of these products. If these articles of food did not decay, and if they did not carry disease germs into the human system, there would not be any very great necessity for a pure food law. But they do decay, and they do carry disease germs, if they are not produced and handled properly.

There is absolutely no excuse for a bad egg. It does not even require extra labor nor extra expense to produce an egg that will not spoil in a hot climate like ours. More than that, an egg that will not spoil is a better egg and will bring a better price upon the market than our common market eggs. And still more than that, hens will lay more eggs that will not spoil than they will of the kind that do spoil. Now, then, what is the plan? Simply "swat the rooster." Separate the hens and roosters after you get all of the eggs you want to hatch and keep them separated all the summer. Hens will lay better without roosters, and will lay in-

degree above freezing. This method of preservation is practiced upon a much smaller scale than the old method, for such eggs are not in suitable form to be used by the housewife.

Poultry and Fruit.

The near-the-city farmer must realize the necessity of growing things for which there is a steady market at good prices. He must grade his produce carefully and offer it for sale in a clean, attractive condition. He must also grow things which will give him an income throughout the late spring and late autumn as well as summer, so his crop season will be a long one; so as to keep all his time profitably occupied; so he will have something to sell during the greater part of the year, says Farmer's Guide.

His poultry will yield a big income during the winter, if properly managed, and a few peach, pear, cherry and apple trees will furnish fruit for canning and preserving in the winter and late autumn. His winter cabbage, turnips, spinach, potatoes and onions should guarantee an income far into the winter. By this means there would be not more than three months between the marketing of the old crop of potatoes, onions, apples and canned fruit and the selling of new onions, lettuce, radishes, etc., while with good management his hens would do their part toward filling the market basket every

Biddy The Hen.

The lost egg—more plainly, the bad egg—costs the family circle of the United States over \$66,000,000 annually. This loss is by no means the fault of Biddy, the hen, who does her thrifty part to solve the "high cost of living," laying yearly over \$400,000,000 worth of eggs. Not a bad one does she lay. How then do we, her beneficiaries, manage to despoil ourselves of two in every twelve of her gifts?

Biddy's product is kept by the farmer a week or two or more before it gets to the country store, where it abides another several weeks before shipment to the city commission merchant. From the retailer in due or undue season, Biddy's eggs reach the consumer's pantry or ice-box, and thence appear by relays on his table. Now, here is a problem of delays which Biddy cannot solve, and it is up to us, mere mortals, to do it. Everybody can help a little, and everybody who helps a little is doing a public service—helping to feed our big family.

No less an agent than the government of the United States seeks to sustain Biddy's effort to feed us, and to co-operate with the farmer in getting fresh eggs to market.

The suggestion has often been made that we substitute thrifty productive, domestic Biddy for the eagle as our national emblem. She certainly deserves a position on our coin.—Christian Herald.

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WILL EGG "HUMPTY-DUMPTY" TAKE A "GREAT FALL"?

—By Carson in Weekly Inter Ocean and Farmer.

fertile eggs. Infertile eggs will not spoil, even in our hot climate, if they are kept clean and dry. Bacteria, which abound in filth, will penetrate the egg shell and decompose the egg, if it be kept in a damp unclean place.

What is the truth about water glass? It is a silicate of soda. The method of its use is this: It is dissolved in water. This solution is poured into a keg, barrel or other container over the eggs. This prevents bacteria from getting into the eggs through the shells. But it does not prevent the chick germ of a fertile egg from growing at our summer temperature as long as there is any oxygen in the shell. After two or three days' growth, all of the original oxygen in the shell is consumed and the chick smothered and dies. Then the egg contains dead animal matter. It is a spoiled egg. An egg not fit for human food.

Eggs are commonly preserved in the shell by cold storage. If they are kept in a modern cold storage room at a uniform temperature and at a proper degree of humidity by themselves they may be kept in a fairly fresh and wholesome condition for several months. The bad flavor of cold storage eggs is due to a multiplicity of causes, some of which are known and some of which are not known. At any rate, it is known that eggs in cold storage slowly but gradually and certainly deteriorate and finally become unwholesome. This may happen in from five to ten months, depending upon the efficiency of the cold storage room.

Eggs may be broken and put into cans and frozen hard and kept for a longer period of time than by the ordinary method of storing in the shell, at a slight

day in the year. So no ambitious, hustling young farmer need be discouraged, or feel cramped because he has a small farm sandwiched in between large ones owned by his neighbors, who refuse to sell him any of their land, provided he is reasonably close to a city. Many farmers are "land poor," while many become rich on ten acres, where conditions are right. A hustling, energetic, persistent, pushing disposition is the first thing necessary. Given such a disposition, together with intelligence and good judgment, and a young farmer might do better on ten acres than his neighbor on his hundred-acre grain farm in some distant neighborhood.

Oats For Poultry.

Threshed oats is fine for fowls, if fed intelligently. They will sometimes produce crop-bound if fed too freely when first fed. Almost any dry, bulky rations will produce crop-bound when fed in large quantity. However, oats is a very valuable ration for fowls but we would prefer to feed it alternately with a mash food made of pure wheat bran, hominy feed and shorts. The standard weight for oats is 32 pounds to the bushel, but it must be remembered that there is no grain so variable in weight per bushel as oats. Ordinarily oats when it approaches the standard weight per bushel makes fine poultry feed. Oats is selling here in the market at 50 cents per bushel. You will find that the fowls will refuse to eat fiber portion of oats—eating only the best of the grain. Oats when fed intelligently and alternately with other foods, is a great egg producer.—Indiana Farmer.



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Starting a Small Fruit Farm.

Mr. C. A. Green:—I have a place containing 6 acres of land; 2 acres grass and balance run-out soil; has some blackberries and a clump of poplar trees.

Would like to get this into shape for fruit and poultry, and ask your advice. Soil very sandy, lays on a hill, though nearly level, sloping to south and west. Apples, pears, plums, and cherries do well here also small fruits, but only once in a while a tree, no fruit ranches altho a town of over 3000. Would you advise small fruit, and vegetables for quick returns while large trees are growing?

Would poplar trees from three to ten feet high be profitable to transplant for shade or on the road?

Would it be better to plant where there is good grass at first and then more planting where the other soil is in shape?

Would only begin on a small scale, 50 or 100 trees and bushes this year, more later as I learn the business. I understand vegetables some but not fruit. Enjoy the Fruit Grower very much.—Mrs. Fannie P. Smith, Vt.

Reply: I advise those situated as you are to have an assortment of small and large fruits growing on your place, the

contain enough lime to perform these functions. The supply of nitrogen in the soil is largely maintained thru the aid of nitrogen-gathering bacteria which work on legumes, such as clover, alfalfa, soy beans and vetch. These small organisms have the power to take nitrogen from the air and, after using it, convert it into an available form of food for plant growth. These bacteria do not thrive in acid soils. Clover, if it grows on such soils at all, fails to develop nodules and does not increase the nitrogen supply in the soil.

The United States Bureau of Soils, after making a soil survey of Butler and adjoining counties in Pennsylvania, recommended the use of lime as a means toward making our local soils more productive. In the maintenance of soil fertility, the crop producing power of a soil, lime has unquestionably won a very important place in agriculture. The recognition of the value of lime in farm practice is not new. Pliny, in his writings testified that liming was practiced by the Romans more than two thousand years ago. In England, Germany, France and other European countries, the application of lime in the form of marl, shells, and



"And I am keeping only this! The rest I sent back."—Le Sourire (Paris).

amount of each to depend upon your ability to manage or to hire someone to manage for you.

When I began fruit growing I had a small patch of strawberries, also one of red and black raspberries, one of blackberries and currants. I planted a small orchard of apple trees, a few pears, plums, quinces and peaches, and a few grape vines. By having an assortment of fruit I had something to sell nearly all the time. When I went to market I could usually carry an assortment of fruits to retail to the consumers at their homes.

If your soil is light and sandy it may need some additional fertility in the way of barnyard manure or commercial fertilizers.

Small trees of the poplar are just as good as larger trees or even better for transplanting, but they can be transplanted when 10 feet high if not too old or heavy. The land now in grass would have to be subdued before shall fruits or trees could be planted there.

Lime and Soil Fertility.

Lime, considered as the source of calcium, is one of the ten essential elements of plant food. As such, it is required in only small amounts, and it is probable that nearly all soils contain enough to satisfy the direct needs of the plant, says Pennsylvania Farmer.

Lime, considered as a basic material capable of neutralizing acids, has other and not less important functions to perform. Many acid or sour soils do not

limestone, has been and is still practiced extensively.

The fertility of our soils can only be maintained by intelligently following the practices which long years of experience by our best farmers have demonstrated to be correct. In modern agricultural practice the factors, organic matter (humus) and lime, are of vital importance to the farmer, and the community at large as well. "Public prosperity is like a tree; agriculture is its roots; industry and commerce are its branches and leaves. If the root suffers the leaves fall, the branches break, and the tree dies." This is the philosophy of the Mongolian people who have maintained some of their soils for more than 4,000 years.

Best Cherry Stocks.

Chas. A. Green:—1. Kindly advise me as to which is the best to have the following sweet cherries root-grafted on to, the native American Mazzard or the imported Mahaleb stock? The varieties in question are Black Tartarian, Windsor, Napoleon and Gov. Wood.

2. Which of these stocks do you use at Green's Fruit Farm?

3. Would you advise planting the Bing and Lambert cherries in northern Ohio.

4. What varieties of sweet cherries would you advise to plant in northern Ohio and what time of year should same be planted and should 1, 2 or 3 year old trees be used?

5. Give description and history of the Syracuse Red Raspberry also Ruby Red and state cause of the Syracuse roots being so high priced?

6. Should red raspberries be grown in hills or in hedge rows?

7. Would you advise growing the Columbian raspberry for canning factory use and is it productive?—Subscriber, Cuyahoga Co., Ohio.

Reply: The Mazzard is the best for all sweet or Heart cherries, but it is more

difficult to propagate them on the Mazzard, thus the Mahaleb is more often used by nurserymen. At Green's Fruit Farm we use both Mazzard and Mahaleb.

Yes, plant Bing and Lambert in northern Ohio if the thermometer does not go below ten degrees below zero. Black Tartarian, Lambert and Napoleon are valuable sweet cherries. Do not plant cherry trees older than one or two years. Plant as early as possible in the spring.

Plants of Syracuse are not easily propagated, as this variety makes but few sucker plants, not one twentieth part so many as does the Cutbert. That is why the price of Syracuse is high. It is one of the most valuable varieties ever grown, large, luscious and very productive. Red raspberries should be grown in hills five feet apart and cultivated both ways. Yes, I would plant some of the Columbian raspberry for canning. It is a great producer.

How About That Boy?

Give them a chance. A boy isn't necessarily all bad because he tells a fib or loots an orchard. Put them on their honor, these youthful offenders, and see how they come back. We've tried it in Portland, and 98 per cent. of the accused have never come before the Juvenile Court a second time.

A boy is not necessarily morally or mentally deficient because he tells a lie. First remember that the child must have an understanding of right and wrong.

A child may steal and still not be defective. There is an apparent weakness in a case of this kind but there are milder methods of correction.

Cigarette smoking is not a stamp of defectiveness.

It is a mistake, in my opinion, to treat a minor offender as a defective because of some petty offense. I've robbed many a cherry orchard myself.

Don't make the boy believe he is bad. A commission of alienists or a so-called psychologist may make a mistake and damn a normal child for life.

Judge Frater, of the Seattle Juvenile Court, was quick to respond. He upheld the study and investigation of those whom he designated as scientific men, and contended that far more crimes and misdemeanors are traceable to physical defects which reflect upon the nervous system than is generally believed.

Small Fruit on a Farm.

Mr. C. A. Green:—We have just purchased a farm and wish to put a part of it into small fruits but do not know just which kinds are best adapted to our climate, etc. We plan to put about 1/4 or 1/2 acre in strawberries, and about the same in raspberries and blackberries, also a few gooseberries and currants. Our land slopes directly to the south with a slight tip toward the west. The ground is a very mellow light loam, and garden truck like carrots and parsnips do exceptionally well. We are about nine miles north of Keene, N. H., and about a five minute walk from a small lake which holds the frosts from us in spring and autumn.

Would the Banana apple do well here, and where can I get some scions for grafting? Just a few to try.—W. C. W. Demerise, N. H.

Reply: You can get better advice from your neighbors in regard to the adaptability of your soil to the different fruits than you can from anyone living so far away as I do. Currants succeed almost everywhere at the north. The important question with you in regard to small fruits such as raspberries and blackberries and in regard to varieties of apples, is whether your winters are severe. If they are severe you will need to get very hardy varieties. You can grow strawberries if your winters are severe by mulching them during winter. The lake though small will be helpful. The Banana apple though reasonably hardy is not so hardy as Wealthy, Ben Davis or Northwestern Greening. Thanks for \$1.00 sent for subscription to Green's Fruit Grower for 3 years.

Cherry Grafting.

Green's Fruit Grower:—Can anyone tell me if cherry grafting is a success and why? Also does anyone know who has the Lambert and Bing cherries and what success? I read in a late Fruit Grower that they are considered hardy in this country. I know them well in Oregon and they are fine there and would like to know their success here.—Mrs. Susan B. Allen, Pa.

Reply: Cherry trees can be successfully grafted but they are more difficult to graft than the apple or pear. We have the Lambert and Bing cherries at Green's Fruit Farm but have not fruited them as yet. They have been fruited for some time on the Pacific coast where they give remarkable results in large and handsome fruit.

Cultivation of the Orchard.

Most farmers who have the home orchard of 50 or 100 trees on their farm seem to regard this portion of their equipment as a source of perpetual income, needing no care or attention other than harvesting the fruit, says Pennsylvania Farmer. They have awakened to the fact during the last few years that the old methods of neglect, as practiced by their fathers, will no longer bring results. Their orchards have ceased to bear marketable fruit and have become a public nuisance in that they are a breeding place for myriads of insect pests and fungous diseases. Does it not seem incongruous when the commercial fruit grower must do everything known to horticulturists in order to bring good fruit, that the farmer should expect even partial success from a system of neglect? Aside from thorough spraying, there is no one operation that will do more to provide good fruit than cultivation.

The apple, depending upon variety, contains about 75 per cent. or more of water. The leaves of the tree evaporate or breathe out about 275 pounds of water per pound of dry matter per growing season. Let us figure roughly how much water this represents—supposing that the tree yielded 5 barrels of apples. These 15 bushels of apples contain 675 pounds of water. The leaves, supposing there were 200 pounds of dry matter, would represent 55,000 pounds transpired during the season. This makes a total for the tree of 55,675 pounds, and counting 27 apple trees to the acre, would mean that during the growing season each acre must give up to the trees, 1,503,225 pounds of water, or 751.4 tons.

During each season, at some time, there is usually a more or less protracted drouth during which time water is very scarce. How can we expect our acre of home orchard to get its 751 tons of water unless we help nature and conserve our water supply? During the winter and early spring, nature supplies us with an abundance of water; so much that the soil goes beyond its point of saturation. What folly it is to let this water waste itself through the underground channels when by a little care we can save it for use during the summer and change it into big juicy, marketable specimens of fruit.

The secret of this conservation process is cultivation. Cultivation is merely an artificial means of preventing soil water from evaporating through the surface into the air. The force of capillarity, or capillary attraction, is constantly pulling this soil water to the surface and unless we provide a check the water will evaporate into the air and be lost. Cultivation provides this check by forming a dust mulch or blanket over the surface, so that the water is drawn by capillary force up to this mulch and then stops, since the capillary attraction is broken. Hence we can in this way turn the rain and snow water of the winter into high priced apples.

The old orchard should be plowed as early in the spring as possible—not too deep, for deep plowing will cut off a large part of the tender feeding roots which forage for the tree's food. Three or four inches is deep enough. Cultivation should then be begun with a disk or spring-tooth harrow. Cultivate once a week at least and if possible, twice a week, up until the end of July. The tree must have time to harden its wood so that it will not winter kill, and by stopping cultivation at this time growth is checked and all vitality goes to harden the new wood. Sow a cover crop in the orchard—crimson clover, rye and vetch or cow peas are all good and will provide humus for next year.

The old orchard has stood by you for many years and given you hundreds of barrels of good fruit. Is it not only fair that you should stand by it during its last years and give it a little care? It will repay you liberally.

Hams and Corn Cobs.

"Smoked over a corncob fire?" laughed the market man. "Never heard of such a thing. Heard of making beds for the pigs out of corncocks, but I guess that's about all they have to do with making pork." No mistake about that fire, is there," says North American.

The visitor said there was no mistake. He told the market man how he used to go to the mill and get corncocks. He took them home and his father put some of them on live coals in a pan of ashes and set them under a barrel in which was hung two, or at the most four, hams, which had been properly cured according to a formula few persons seem to know nowadays.

HOW HAMS WERE SMOKED.

Some folks had smoke houses and cured more than two hams at a time, but mostly the community was wedded to the barrel notion. In either case, when it was guessed that they had been smoked enough, the hams came out richly brown on the outside and, pink—not red—inside. And they were hams—fat, tender and not stringy, lean with none of the modern

preservatives that make it adamant when placed over a fire, and without that unpleasant taste down next to the bone that is found in so much of the machine-cured product. With old-fashioned buckwheat cakes—the kind made with "emp'tins"—and set to rise over the night—it made a breakfast worth talking about.

It was found then that few hams of the real old-fashioned kind come into Philadelphia. They were never shipped away much in the old days. Each family tried to make just about enough to take it through the winter, with the help of the pork laid down in the barrel and the corned beef laid down in another barrel. But there are a great many people in Philadelphia who would like to get hold of them when they do their fall marketing. They would have to pay well for them, too.

SCRAPPLE AND SAUSAGE HIGH.

Since the first day of October, which is scrapple and sausage day almost as religiously as the fifteenth of September is the day of the winter hat, markets have been filled with the foods needed in cooler weather.

A good many folks are buying their pork and making their own sausage with their food choppers nowadays, which is a good way to be sure that it is right.

The brilliant red of the baskets of crab-apples strikes a pleasant note in the green of the market stalls, but think of paying \$1 a basket for these when you remember the time you could go and shake a neighbor's trees and the more you carried away the better he liked it.

Sober brown of the chestnuts contrasts with the red of the crabapples.

Fruit Instead of Grain.

Much more food can be grown on an acre devoted to fruit than can be produced with any kind of grain, says Campbell's Scientific Farmer. Fruit growing also provides a greater amount of work and requires a larger number of helpers. To the extent that fruit growing is substituted for grain growing there will naturally be an increase of country farming population. This is what is the most needed to make land valuable. The growing of grain makes the land poorer, especially where the grain is sold. Where fruit is grown the chief loss to the soil is in the mineral elements, and the sale of the fruit brings money to purchase these. Selling grain never returns enough to restore the fertility expended in growing.

The World Our Schoolhouse.

The first factor in the larger education is this world in which we live and love and work and weep and laugh and die. For in no mere figurative sense, the world is our schoolhouse. Nothing short of this vast, mystic, wondrous world justifies the institutions of learning throughout our own land, throughout all lands. The little red schoolhouse on the hillside, the log cabin at the country crossroads, the pile of buildings emphasizing the importance of the modern college and university, the dream of a Brooklyn University which is to come true, and gloriously true—all exist for the purpose of showing students how to find their way, physically, mentally, socially and morally, about this great schoolhouse named the world.

Emerson had this truth in mind when he said: "He who knows the most, he who knows what sweets and virtues are in the ground, the waters, the plants, the heavens, and how to come at these enchantments, is the rich and royal man." Ah! the world is packed with enchantments and education is the magician whose golden hammer breaks down the four walls of the classroom, sending the scholar forth to behold the limitless horizons of the world, and all that is within them. Education naturalizes us as citizens of the universe. Shame on the man who is so local as to be purely national or international, when God wants him to be universal. As the old mystic expressed it: "The universe, vast and deep and broad and high, is a handful of dust which God enchants." Ours is an enchanted universe, and oh, what unspeakable splendors lie hidden within this handful of dust!

Warning.

The minister was coming to dinner, and the lady of the house killed a rooster in his honor. Her little boy was very much annoyed, and thought it cruel.

Some time after this the lad saw the minister coming up the road. He ran into the yard and began putting all the hens and chickens into the roosting place, saying all the time:

"Shoo, shoo! Here comes the man that ate your father!"

Mr. Chas. A Green:—Allow me to add my testimonial to the fact that Green's Fruit Grower is really a paper "with a mission." It is invaluable to me.—John Boler, Sawyer, Wis.



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Indiana Horticultural Meeting.

The only apple talk on the program was made by C. B. Durham, assistant secretary of the Indiana apple show. In discussing "Fruit growing in Indiana and prospects for the 1913 apple show," Mr. Durham made a comparison between the opportunities in Indiana and the northwest, reports The Farmers' Guide. "I have seen all the apple sections of this state," he said, "and every fruit valley in the northwest, and my honest opinion is that the Indiana grower using western methods has a far greater opportunity for consistent profit than the western apple specialist." Among advantages assigned to Indiana he named: Sufficient regularity of yield under good care to secure high average profits; an always greater demand than supply for good home grown fruit; an impossibility of over-production, such as the northwest experienced last year; excellently flavored apples; unsurpassed markets, indicated by the fact that three-fourths of the population of the United States dwell within the first four parcel post zones from Indianapolis; reasonably valued land with high adaptability to fruit production; increasing reputation of Indiana fruit. Apple show prospects, he said, were never better. The crop is better than last year, and with a natural growth the show should be much larger than last year.

"Grape Growing" was ably discussed by M. H. Pugsley, owner of a successful 40-acre vineyard at Paw Paw, Mich. Mr. Pugsley pointed out that the famous grape growing parts of the world were confined within a 500-mile wide belt of about the same latitude about the globe. Commercial aspects of grape growing such as selection of a site, care of vines, packing and marketing were described. Under present Indiana conditions large vineyards were not considered feasible. The Indiana farmer, however, who wishes to grow grapes for home use and local markets would find his efforts satisfactory. Concord and Delaware for such men are advisable varieties. In rich soil too much wood is a danger. This can be controlled by allowing six instead of the usual four arms to develop and by a heavy pruning of the greater number of arms. A combination spray of proven efficiency against the curculio, grape berry moth, black rot and many other troubles is made by using 2 pounds arsenate of lead, one-half pound whale oil soap to 50 gallons of a 3-5 Bordeaux mixture (3 pounds blue stone, 5 pounds hydrated lime).

A landscape gardener of Indianapolis, C. M. Dunn, in his address on "Beautifying the Home Grounds," said that the first and most essential thing to make home grounds attractive was to clean up all piles of brush and trash, and to cut all weeds. This is not only necessary from the esthetic standpoint but is highly desirable as a sanitary measure. A few shrubs should be planted to screen corners of buildings and to make picture-like effects. Any natural beauties should be preserved. Native shrubs are best for home planting—these, however, should not be taken wild from the woods on account of the fact that they are apt to be infested with insects. Buy the shrubs from a nearby and reliable nurseryman. Plant trees for shade, but leave plenty of open space in the lawn.

"On time," was a phrase which Geo. T. Blue, proprietor of Fairview Fruit Farm, near Indianapolis, used often in his talk on small fruits. The man who gets the best prices for small fruits must get his spring cultivation done in time. His spraying, and above all the presentation of his fruit to carefully selected markets must be on time. "Berries should be hauled as carefully as milk," said Mr. Blue, "for the fruit is almost as perishable. Keeping quality of fruit after picking may be controlled to a great extent by careful handling during the picking."

That marketing is the biggest half of fruit growing was ably pointed out by A. M. Fox. "The biggest secret of successful marketing," said Mr. Fox, "is proper preparation of fruit for the market. This means honest grading and attractive packing in appropriate containers."

Here is Something Worth Reading.

The editor of Green's Fruit Grower has often been complimented upon the selections which he has re-published, being mostly the sayings of wise men. The best thing that I have ever published is given below. No such words as these were ever before spoken or published. While these words were spoken many years ago they are as helpful today as when spoken or even more so. It is not necessary for me to give the name of the Man who spoke these words. He has long been my Teacher.

The arrangement of these words is by Matthew Arnold, one of the great literary lights of the world.

The time is fulfilled and the kingdom of God is at hand! change the inner man and believe the good news!

He that believeth hath eternal life.

He that heareth my word, and believeth him that sent me, hath eternal life and cometh not into judgment, but hath passed from death to life. Verily, verily, I say unto you, the hour cometh and now is, when the dead shall hear the voice of the Son of God, and they that hear shall live.

I have come forth from God, and am here, for I have not come of myself, but he sent me. No man can come unto me except the Father that sent me draw him; and I will raise him up in the last day. He that is of God heareth the words of God; my doctrine is not mine, but his that sent me. He that receiveth me receiveth him that sent me.

And why call ye Lord, Lord—and do not what I say? If ye know these things, happy are ye if ye do them. Cleanse that which is within; the evil thoughts from within, from the heart, they defile the man. And why seest thou the mote that is in thy brother's eye, but perceivest not the beam that is in thine own eye? Take heed to yourselves against insincerity; God knoweth your hearts; blessed are the pure in heart, for they shall see God!

Come unto me, all that labor and are heavy burdened, and I will give you rest. Take my yoke upon you, and learn of me that I am mild and lowly of heart, and ye shall find rest unto your souls. For my yoke is kindly, and my burden light.

I am the bread of life; he that cometh to me shall never hunger and he that believeth in me shall never thirst. I am the living bread; as the living Father sent me, and I live by the Father, so he that eateth me, even he shall live by me. It is the spirit that maketh live, the flesh profiteth nothing, the words which I have said unto you, they are spirit and they are life. If a man keep my word, he shall never see death. My sheep hear my voice, and I know them, and they follow me, and I give unto them eternal life.

If a man serve me, let him follow me; and where I am, there also shall my servant be. Whosoever doth not carry his cross and come after me cannot be my disciple. If any man will come after me, let him renounce himself, and take up his cross daily, and follow me. For whosoever will save his life shall lose it; but whosoever shall lose his life for my sake, and the sake of the good news, the same shall save it. For what is a man profited, if he gain the whole world, but lose himself, be maledict of himself? Therefore doth my Father love me, because I lay down my life that I may take it again. A new commandment I give unto you, that ye love one another. The Son of Man came not to be served, but to serve, and to give his life a ransom for many.

I am the resurrection and the life; he that believeth in me, though he die, shall live; and he that liveth and believeth in me shall never die. I am come that ye might have life, and that ye might have it more abundantly. I cast out devils and I do cures today and tomorrow, and the third day I shall be perfected. Yet a little while and the world seeth me no more; but ye see me, because I live and ye shall live. If ye keep my commandments ye shall abide in my love, like as I have kept my Father's commandments and abide in his love. He that loveth me shall be loved by my Father and I will love him and will manifest myself to him. If a man love me, he will keep my word, and my Father will love him, and we will come unto him, and make our abode with him.

I am the good shepherd: the good shepherd lays down his life for the sheep. And other sheep I have which are not of this fold; them also must I bring, and they shall be one flock, one shepherd. Fear not, little flock, for it is your Father's pleasure to give you the kingdom.

My kingdom is not of this world; the kingdom of God cometh not with observation; behold the kingdom of God is within you. Whereunto shall I liken the kingdom of God? It is like a grain of mustard seed, which a man took and cast into the garden, and it grew, and waxed a great tree, and the fowls of the air lodged in the branches of it. It is like leaven, which a woman took and hid in three measures of meal, till the whole was leavened. So is the kingdom of God as a man may cast seed in the ground, and may go to bed and get up night and day, and the seed shoots and extends and he knoweth not how.

And this good news of the kingdom shall be preached to the whole world, for a witness to all nations; and then shall the end come.

Nothing pays on the farm better than kindness, and the lack of it is a constant, though invisible, drain on the pocketbook. The horse will not do his work so well, the cow cannot produce her best results nor the hog fatten if every time a human being shows himself the poor, dumb brute must figure on how best to dodge a bluff in the head.

November, 1913.

I have been taking your paper for about 30 years. It is all right.—E. M. Harbough, Mechanicsburg, Ill.

The Truth About Florida

There are all kinds of lands in Florida—good, bad and indifferent. This statement is just as true of Illinois land. It is true of Iowa. It is true of California or any state, north, east, south or west.

Some regions in Florida are worthless for agricultural purposes. Other tracts have and are today returning their owners a rich income every year. These good tracts were bought by people of judgment—people who kept their eyes open and saw what they were buying. People who have been "stung" in their land purchases in Florida and other states bought carelessly. They did not investigate. They knew little of the soil, climate and rainfall. They did not ask, "Has anybody ever made money growing vegetables and oranges here?" They took the word of the land salesman. Sometimes they lost their money. Instead of blaming the land company or their own careless judgment, they criticized the entire state.

The time has come for a change in Florida land selling—in all land selling. We have begun that change.

The Wauchula Development Co. was organized after a 28,000 mile search for land that could be sold under a guarantee. The tract is different from ordinary Florida land. It is known as Combination Soil. Now this Wauchula Combination Soil is equally well adapted to vegetables and citrus fruit.

It offers peculiar advantages. Our settlers come here with a little money.

They set out their grape fruit and orange trees. Then instead of wasting money on living expenses while waiting for these to mature, they earn money by growing vegetables. They plant vegetables between the tree rows. The warm, pleasant climate, abundant rainfall, good drainage, produce three crops a year—sometimes four.

Settlers in the Wauchula, Florida, District practically pay their way from the start. Once you're established, vegetables earn a good comfortable living right along. And all the time the grape fruit and orange trees are getting bigger.

When they begin to bear the real profits come in. Orange growers make \$3,000 to \$8,000 a year. Some make \$10,000 and more. We don't emphasize these high incomes especially. Because there are not so many of them. But \$3,000 a year, \$5,000 and \$8,000 are common.

\$500,000 bank deposits in three small towns within a radius of five miles prove the grove owner's prosperity. Steve Griffin made over \$6,000 from 15 acres of grape fruit and orange trees this last year—only part of his grove. W. L. Warren made over \$2,000 the first year he was down here. Some men here don't feel that they are doing well unless they make better than \$1,000 on every acre every year.

Wauchula, Florida District

Combination Soil Proved by Crops—Fortunes Built from Small Investments

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"Start payments on your land as soon as possible, to get the best choice of location. Come down and see your plot any time within a year. If you're not satisfied, we return your money with six per cent for the time we've had it."

We give you the facts about Florida. We tell you the truth about the district around Wauchula. But we don't expect you to accept our statements blindly.

Come down here and look things over. You'll find here every opportunity we promise and more. Start payments on your land now. The payments are small. Anytime within a year you can come down here and inspect your land. If it isn't as represented, we'll give you back your money with six per cent interest. (See Bankers' Guarantee).

Pick oranges from the trees. Talk to the grove owners. Let them tell you what they make. Note the character of the soil. See how it grows vegetables as well as grape fruit and oranges.

Question the new settlers. See what they have done in the few months they've been there.

Walk around Wauchula. Look at its pleasant homes, its schools, its churches, lodges, stores, banks. Observe the new building going on. Wauchula has grown from 1,500 to 2,000 in the last year. Visit Vandolah, the new town west of Wauchula. See the activity of this region.

Come down during shipping season if you can. See what splendid service the railroad gives. Study the cash prices paid. Figure out how much you could make.

Talk to natives and newcomers about climate and water supply. Ask about their health down here. Learn what fishing and hunting there is for vacation time.

Live Well, from the Start—Grow Soon to An Income of \$3,000 to \$8,000

Write for Facts

You don't have to wait for prosperity at Wauchula. You begin to make it from the start. And year by year your income is bigger.

Don't set a limit on your future. Come to Wauchula where you can keep on making more money steadily. Ten acres is enough to begin on. Buy more land as you can use it. Every acre means more money added to your income.

Get the facts. Get the story of the Wauchula District as the grove owners tell it. Study their recommendations. Read the figures of earnings. Then go over our offer carefully—the moderate prices, the easy terms, the guarantee by bankers.

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Box 160

Wauchula, Florida

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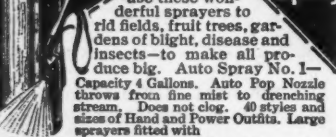
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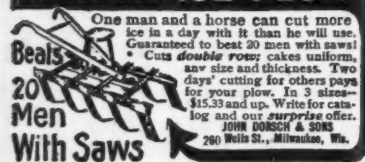
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Write for valuable free literature "Treatment of Diseased Trees." Please give your dealer's name. Charles Fremd, 117 Orchard St., North Rose, N. Y.



Orchard Notes.

Written for Green's Fruit Grower by Arthur C. Melvin, Mass.

Some complain that the care of an orchard and small fruits is hard, unceasing work. This can be said of any branch of agriculture. It takes push and hard work to make any enterprise a success.

If the thought of an orchard, first with its quantities of fragrant blossoms and later the ripening fruit, just makes you boil over with enthusiasm, you are on the right road to win out.

The value of the apple as an article of food for the table is little known by a good many. Let us shout the praises of this king of fruits till it is regarded as an essential in every home.

Do not let decaying fruit remain in the cellar. Sort often and the perfect fruit will keep much better. In the first place much ought not to be allowed to decay. Put every pound to some good use.

Have a care that the rabbits do not gnaw the bark from the young trees while the ground is covered with snow. All trees should be protected from these little animals.

latest fruit magazines. Keep the table well supplied with them. They are safe and helpful literature for the boys and girls.

The wise farmer does not try to raise a crop of fruit and a crop of hay from the same land. By so doing he fails to get the best possible results from either. Better put all the attention to the orchard and raise the hay on some other land.

Every tree in the orchard should be numbered and a record of each tree kept in a book for the purpose. Write down the date and from whom purchased. One soon has a most interesting history of his trees.

One of the most healthy and harmless beverages for the home is unfermented grape juice. So too many grapes cannot be raised on the farm. Better send for the free Bulletin on the making of grape juice issued by the Department of Agriculture.

Apples are the most common fruit nearly everywhere. In fact, they are so common that we are apt to forget what a treat some would be to many people. Our friends in the city may not eat a

Photograph of Baldwin Apples. Through the Courtesy of Coe-Mortimer Company of New York City.

The Baldwin is the most popular apple for the eastern and middle states. The tree is a good upright grower coming into bearing at an early age. Though not considered hardy enough for the northern and western states, it is reasonably hardy. I have never known trees to be injured by the severity of the winters of western New York, where some times the thermometer goes ten degrees below zero. The fruit of the Baldwin is large, dark red, attractive and fairly good in quality. There are many people who think the Baldwin is a first class apple in quality, but I do not agree with these views. The Baldwin is a winter variety and is at its best for eating in late winter or early spring. The Baldwin has a tough skin; bears shipment well. It hangs well on the tree, whereas some good varieties have a tendency to fall.



Too many men do not realize the importance of careful and correct pruning. It should never be done by a novice. Find an expert orchardist and work with him to gain the proper experience.

A good way to keep apples is to pack them in forest leaves. Place a good layer of leaves first, then a layer of apples and so alternate till the barrel is full. The leaves soak up any moisture that may run from decaying fruit. Keep in a cool place.

A good orchard increases the value of any home. The sooner one is started the better. Many good orchards are not for sale as their owners are loth to part with them. Good bearing fruit trees ought to be one of the "standbys" on every farm.

In every branch of industry there is a striving for greater efficiency in methods. It is a hobby and fortunes are made by employing scientific principles of management. There is a chance for the same in the orchard. Do not be satisfied with the methods of a decade ago.

Many good trees have been cut down because they yield small or no crops. Save such trees and study the reason, as there must be one. It takes too long for a tree to mature to be in haste to destroy them.

Every fruit grower should make it a point to keep abreast with the times. The surest way is to read the best and

really good one in many months. A barrel shipped away as a surprise would be a most acceptable gift.

The local market must not be overlooked. Good fruit will always sell, if one goes about it just right. If it moves slowly something is the matter. It may be scant measure given previous years or too high prices. A customer never forgets these instances.

A poorly fed tree cannot do its best any more than a poorly fed man or animal. It is surprising what a difference a wheelbarrowful of manure around a tree will make. During a severe drought the newly planted trees should be given a few pails of water frequently.

Here are a few condensed rules: Trim a little every year, rather than much in any one year. Peach trees require more pruning than most trees; at least one-half of the new growth should be removed each season. Cherry trees require the least pruning; merely cut out dead, broken or "crossed" limbs. Other trees need a judicious thinning out and, sometimes cutting back. If two branches interlock, remove the smaller one. Avoid cutting so as to leave "stubs"; make neat cuts close to union; paint all large wounds. Be chary of cutting off large limbs; if it must be done, saw on under side first, partly through, and then saw from above.

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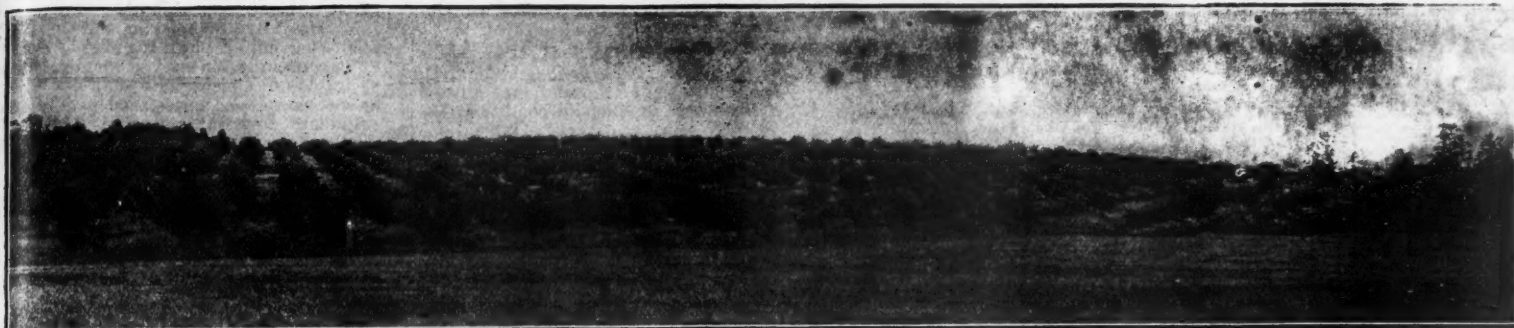
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J. A. BAUER

Box 15, - JUDSONIA, ARK.



A ten year old orchard on the farm of Maurice Cayford, Somerset county, Maine, that last year yielded 6,000 barrels of the Ben Davis apples.

An Orchard as a Commercial Enterprise.

Written for Green's Fruit Grower by
John E. Taylor, Maine.

Making an orchard bring practical results is one of the aims of John C. Griffin, a well-known insurance agent of Somerset County. He has about 1200 apple trees, the oldest of them being about six years, that he is raising as a commercial enterprise more than an experiment, and the results so far give entire satisfaction, and the orchard promises to be equivalent to a big insurance policy of the endowment type within a few years.

Though Mr. Griffin's orchard is yet young, its little history has many points of instructive value and interest. It was six years ago that Mr. Griffin discovered the land for his orchard. It covers about 30 acres and up until the time that he came into possession of it it had been used year after year to get hay from, but for many years nothing had been done to improve the land and it had become run-out. The soil is a gravelly loam and has been pronounced by the State Horticulturist as being ideal for an orchard.

In plowing the land for his new venture he used the same method as if plowing for the common crops, going about six inches deep. He harrowed it thoroughly, going over the ground several times, making the dirt mellow and as light as possible. He employed an engineer to lay out the ground for the trees, planting them 30 feet apart, so that rows run even each way.

In every move that he made in this work he planned for results. The first fall he plowed 15 acres and the following spring set the trees out, planting between the

trees beans, potatoes and sowing buck-wheat. These crops paid for the labor involved, leaving only the trees and part of the fertilizer as net cost. More trees were planted the next year so that now the orchard contains about 400 Ben Davis, 400 Ganos, 250 Wealthys, 30 McIntoshes and a few earlier varieties for home use, so that he has now about 1200 trees.

Whether the demand was greater than the supply in apple trees during the time that Mr. Griffin started to set out his orchard and the last trees that he bought is not known, but the first year he got his trees for 25 cents apiece; the next year 30 cents apiece, and the next year 38 cents apiece. They have now jumped to 50 cents apiece in lots of 100 or more.

Most orchardists in setting out their first trees make preparations for many trees to die and so did Mr. Griffin, but his loss was remarkably small. His loss to Ben Davis and Gano was not over 5 per cent. and not over 2 per cent. of the Wealthys.

Mr. Griffin believes that the soil in the orchard should be kept stirred and the ground should always be kept cultivated. After the first year or so he has used as crops oats and wheat. Up to that time he had planted potatoes, corn and beans. He uses the former crops now as he gets the benefit of the products for his hens and stock, and after threshing the grains he hauls the straw back into the orchard, using it as mulch. He, in setting out his orchard and preparing the ground, did not use any dressing or fertilizer but each year now as he sows his grains he uses the ordinary amount of commercial fertilizer. This year he had five acres of oats and two acres of wheat. He harvested 200 bushels of oats and a good crop

of wheat. He plans to plow about seven acres each year, getting through the orchard in about four years. When he sows his grain he seeds down the piece and the next year harvests the hay.

One derives a great deal of pleasure from the growing child but the real pride comes at the mature age, and so with Mr. Griffin's orchard. This orchard has furnished a lot of gratification and pleasure, but this year he had the satisfaction of realizing that practically every tree was thrifty, that his methods used were practical, that results to date were all that could be desired and then to have that pleasure of seeing a part of this orchard come into bloom and ready to furnish an income. Early this spring the trees were well-blossomed and the fruit was perfect in shape, flavor and size, this fall.

The methods of Mr. Griffin have been original in a great many respects in the care of his orchard. Up to the present time he has never sprayed his orchard, but in the place of this he has had his man go among his trees and pick all the nests of insects. This has been done often enough to keep the trees from being infested. He believes that the trees have done better than they would have if sprayed and the cost has been less. He is a firm believer in pruning an orchard and not to allow the tree to use up its energy in feeding unnecessary branches and not allowing too much to go into top and branches. He prunes to get the shape as well as to cut out unnecessary limbs. He plans to prune once a year and next year he will spray the orchard on account of the brown tail moths that are now prevalent here.

Protecting the trees from mice has been brought about satisfactorily with Mr.

Griffin. He uses a wire netting not unlike a fine wire fence that is circled about the tree two feet high. This has been made so as to provide for future growth of the tree and has proved that it protects, for in only one instance has he had a tree girdled with this netting around it. This was when the snow came up above the wire and the mouse gnawed in over the top. Mr. Griffin estimates that the cost of this wiring is 15 cents per tree, but it is good for many years.

A tree is worth a dollar when it is set out, according to Mr. Griffin, and enhances in value a dollar each year. He reckons that his trees will have reached a fair bearing age when twelve years old, but from now on his trees will be a paying proposition and he feels satisfied that this orchard is one of the best investments he has made in his lifetime.

A few of the many reasons why we should plant trees. First, it beautifies our homes, reduces the cost of our living in furnishing us with fruit, and protects us from the hard winds, making our lives more healthy and pleasanter than they otherwise could be. I am convinced of the fact that if there had never been a tree planted on the Plains there would not be more than half as many people, and land would not be worth more than half its present value.

Enterprising.

Visitor—"Can I see that motorist who was brought here an hour ago?"

Nurse—"He hasn't come to his senses yet."

Visitor—"Oh, that's all right. I only want to sell him another car."—Judge.



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Is proving a most useful outfit for garden, farm, factory and home. It is adapted to a variety of uses, such as spraying, whitewashing, buggy and window washing, for oiling floors, to extinguish fires, etc. A winner.

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For large orchards and where heavy pressure is required we unhesitatingly recommend the "Samson." Well balanced mechanically, powerful and efficient. The "Samson" sprayer will "fill the bill" admirably for large fruit growers wanting the strongest and best hand sprayer. See illustration below.



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Lord Ullin's Daughter.
Published by Request.
A Chieftain, to the Highlands bound,
Cries, "Boatman do not tarry!
And I'll give thee a silver pound
To row us o'er the ferry."

"Now who be ye, would cross Lochgyle
This dark and stormy water?"
"O, I'm the chief of Ulva's isle
And this, Lord Ullin's daughter."

"And fast before her father's men
Three days we've fled together;
For should they find us in the glen,
My blood would stain the heather."

Out spoke the hardy highland wight
"I'll go my chief—I'm ready.
It is not for your silver bright,
But for your winsome lady."

By this the wind grew loud and space;
The water wraith was shrieking;
And in the scowl of heaven each face
Grew dark as they were speaking.

But still as wider blew the wind,
And as the night grew darker,
Adown the glen rode armed men—
Their trampling sounded nearer.

"Haste thee, haste!" the lady cried;
"Though tempests round us gather;
I'll meet the raging of the skies,
But not an angry father."

The boat has left a stormy land,
A stormy sea before her—
When, Oh! too strong for human hand,
The tempest gathered o'er her.

And still they rowed amidst the roar
Of water fast prevailing—
Lord Ullin reached that fatal shore:
His wrath was changed to wailing.

For sore dismay through storm and shade
His child he did discover,
One lovely hand she stretched for aid
And one was round her lover.

"Come back! come back!" he cried in grief,
"Across this stormy water;
And I'll forgive your Highland chief,
My daughter!—Oh, my daughter!"

Thomas Campbell.

Selling Apples Direct to the Consumer.

In a letter from J. H. Hale, Conn., of recent date, he says that he harvested a glorious apple crop and that all orchard trees were in splendid condition.

Mr. Hale gets out a few attractive circulars which he uses for selling his apples direct to the consumer. We are confident that a great many of our readers who live near large cities could reach the consumer direct by making a proper effort.

Mr. Hale's argument in favor of universal apple eating is so clever that we have decided to reproduce some of it here: "Hale's Baldwin Apples of Quality with the Flavor of Old New England.

"Beauty and food value combined. Each apple sealed by nature in germ-proof covering, as beautiful as Jack roses. No pure-food laws required to guarantee Hale's apples. They are nature's high-grade product, unadulterated, direct from the orchard to the consumer.

"The substantial food value of apples for culinary purposes has long been recognized in practically every home in the land; and a goodly number of people, aside from the small boy, have always been consumers of apples in their natural state.

"The old adage: 'An apple a day keeps the doctor away,' is well supplemented by the recent statement of a lady of 76, with the bloom of youth on her cheeks, and today looking not over 50, who attributes it all to her habit of eating from two to six apples daily. It is also a well-recognized fact that the appetite for strong drink can be largely taken away by the daily consumption of apples.

"For centuries, insect and fungus diseases destroyed the exterior appearance and beauty of most apples, and it is only within very recent years that science coming to the aid of horticulture has

from any one tree, while the old plan was to gather all at one picking and ship ripe, half-ripe and green all together.

"In packing for market, we grade extra selected specimens into uniform sizes; paper wrap each apple, and pack in the standard western apple box. Apples 3 inches or more in diameter are graded as AA, and those 2½ to 3 inches as A.

"We also pack in barrels, apples unwrapped, a standard A grade and also a B grade which, while sound, long-keeping fruit of equally good quality, have slight blemishes that prevent them from going into the A grade."—The Southern Fruit Grower.

Color Barred Fruit.

There was a time when prejudice was carried so far in Holland that the sale of oranges and carrots was forbidden, says Argonaut. Orange was the color of the stadholder's family, and when the democratic feeling against this family was at its height the fruit which gave the color to nature, and even the harmless carrot, which more or less resembles it in hue, were placed under the ban. Of course, there were persons of moderate temper who thought that this was going too far.

Effects of Gambling.

An habitual gambler is only one remove from a mentally diseased person, says Literary Digest. The chief allurements and the chief excitement of gambling is found in the rapid alternation of opposing emotions, and that without participation of the intellect. Thus habitual gaming unfits its votaries for all concentrated mental effort, and in its most exaggerated form it is an affair rather of pathology than of morals. Gaming even tends to alter the facial expression—to produce what is called the "gambler's face," characterized by a peculiar hardness

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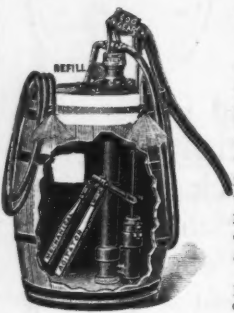
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The O. K. Cog Gear Barrel Spray Pump

The special features are the cog gear, malleable iron adjustable base for end of barrel. It is built to withstand the destructive acids, lime and others spray materials which cause the ordinary sprayers to fail in the fight. It has a patent brass cylinder plunger and ball valves, making it almost indestructible. The handle is wrought steel with cog gear, to enable the operator to maintain a pressure of 200 lbs. or more, if necessary, with very little effort. It can be attached in a few minutes to any barrel. The O. K. Spray Pump is one of the most formidable weapons in the warfare against all insects and pests of every kind.

Price, as illustrated, without barrel, including two 15-ft. lengths of hose, two stop cocks and two nozzles, complete, ready to use. \$17.00

8 ft. Extension Pipes, 60 cents each.

Green's Cog Gear Barrel Spray Pump No. 18 For Small Orchards

It has bronze ball valves and brass seats; the plunger is brass fitted with hemp packing. Will handle hot, cold or any caustic mixture. The cylinder and discharge pipe are all brass. The air chamber is 32 inches in length, enabling the pump to throw a uniform, constant and elastic spray. It has good leverage, is very powerful and easily operated. The Mechanical Agitator stirs the solution from the bottom, making it impossible for this pump to clog under any circumstances. This pump can be used on any barrel.

The best pump on earth for the price.

Price as illustrated, including mechanical agitator, 15 ft. hose and nozzle, ready for use \$8.80

GREEN'S GRAFTING TOOL



A complete tool for grafting, made in one piece of forged steel. Price, Postpaid, 75c.

GRAFTING WAX

1 lb. postpaid, 45c. ½ lb. postpaid, 30c.

NOTICE—We handle a complete line of Power Sprayers and Spray Solutions. Send at once for circular and get a complete spray calendar free.

Address GREEN'S NURSERY CO., Service Dept., ROCHESTER, N. Y.

BUCKET OR BARREL SPRAY PUMP

TWO PUMPS IN ONE

It has all the advantages of the ordinary barrel pump and bucket pump combined. Has one-half more air chamber than any other make of bucket pump. Is made of brass with ball valves; handles and foot rest are malleable iron.

When used as a barrel pump, detach the foot rest and attach pump to top of barrel.

Price No. 24 complete, ready to use, with agitator, 5 feet of 3-ply hose and graduating Vermorel, fine or coarse spray, and solid stream nozzle. \$4.45 With 4' extension pipe for higher trees. \$4.75



Barreled apples awaiting shipment by canal at Medina, near Rochester, N. Y.

taught the way to destroy these pests and allow the apple to come to its own beauty of appearance, as well as food value.

"The far west was first to grasp and fully develop new methods, and the beauty of their fruit has been such an attractive feature of our fruit stands in recent years as to stimulate the daily consumption of apples far beyond that in former years, and to a large degree displace oranges, bananas and other fruits for dessert purposes.

"Beauty of fruit and style of packing have been the main factors in placing apples in the lead of all other fruits in recent years, and now that we of the East are growing as beautiful fruit as any, and of highest quality, such as can only come from the rocky hills of old New England, the apple has attained an added value that places it in the very front rank of wholesome pure food products.

"The J. H. Hale orchards, covering over 300 acres at Glastonbury and Seymour, Connecticut, are located on high rocky hills, especially selected where soil conditions, air, and frost drainage, give ideal conditions for the natural production of high-grade fruit. Here were planted varieties of apples known to find their most congenial soil and climate east of the Hudson, and by the aid of best up-to-date methods of culture, feeding, pruning, and spraying, wonderful orchards have been created that are now producing fruit not to be surpassed in beauty or quality by that of any other orchards in America.

"Everything that science and skill can do to aid nature in perfecting apples in the Hale orchards has been done, even to the thinning of the half-grown fruit from the trees in mid-summer so that one specimen should not touch another and each be free to develop its individuality and full perfection.

"In harvesting these scientifically-grown apples only matured specimens are taken from the tree at each picking, and it is a month or more before all are harvested

which is easily recognizable. All this we learn from an article contributed to The Medical Record (New York) by Dr. J. Leonard Corning, of New York. He sketches rapidly the world-wide character of the craze, and notes that lawmakers have tried to stamp out the evil by stringent legislation, but adds that "the fact that these laws have been powerless to stamp out the practice is the best proof of how firmly the propensity is rooted in the instinctive life of the race."

Tools Exposed.

It is astonishing, as one rides through a prosperous farming community, to see the evidences of recklessness in this matter. There are several ways to shorten the life and usefulness of farm implements. The quickest way to spoil them is the one that is most common; leaving them out in the weather. The wife might as well set the sewing machine out in the rain until she needs it, as the man to leave his binder in the field or barnyard through the winter, and then expect it to start up at harvest time and go smoothly through his harvest, says The Farmer's Guide.

I have known two binders that have served eight and twelve years without giving trouble enough to mention. The one that has run the eight years was apparently in as good condition to be stored away at the end of last harvest as it was when new. But this binder is never allowed to be caught in a rain, nor to be unnecessarily exposed to the weather. It is not even allowed to stand over night in harvest without the binder cover spread over it to turn rain and dew.

I know of another binder that was never sheltered, but after harvest was pulled to the side of the barn for the winter. This man always had trouble in harvest, and wore out two machines while one ought to do more and better work. So with all the other tools.

CLASSIFIED ADVERTISEMENTS

No display advertising will be placed in this department and no type larger than 6-point. The first three words only to be printed in capital letters. Each abbreviation and number will count as one word. Rate 10 cents per word for each insertion. No advertisement inserted for less than \$1 per issue. We cannot afford to do any book-keeping at this rate. Cash must accompany every order. Orders must reach us not later than the 15th of the month previous to the month in which the advertisement is to appear.

Terms: **CASH WITH ORDER.**
Green's Fruit Grower Co., Rochester, N. Y.

HELP WANTED

WANTED—A woman who has a little spare time and needs to earn money. Write to the MacMaster Specialty Co., Syracuse, N. Y.

WANTED—Salesman, to sell apple barrels, boxes, baskets and all orchard supplies. Address, P. McKenna's Sons, Honesdale, Pa.

AGENTS—Novelty knives and razors are lighting sellers. 100% profit. Exclusive territory. Goods guaranteed. Novelty Cutlery Co., 154 Bar St., Canton, O.

REPORT LOCAL INFORMATION, Names, etc. to us. No canvassing. Spare time. Exceptional proposition. Enclose stamp. National Information Sales Company, Dept. HBK, Cincinnati, O.

MEN AND WOMEN OVER 18, Get Government Jobs. \$65 to \$150 month. Parcel Post and Income Tax mean hundreds of Postoffice, Railway Mail and Internal Revenue appointments. Write immediately for free list of positions now available. Franklin Institute, Dept. B-147, Rochester, N. Y.

MALE HELP WANTED

LOCAL REPRESENTATIVE WANTED. Splendid income assured right man to act as our representative after learning our business thoroughly by mail. Former experience unnecessary. All we require is honesty, ability, ambition and willingness to learn a lucrative business. No soliciting or traveling. All or spare time only. This is an exceptional opportunity for a man in your section to get into a big paying business without capital and become independent for life. Write at once for full particulars. National Co-Operative Realty Company, L-638, Marden Building, Washington, D. C.

FARMS WANTED

Wanted to hear from owner who has good farm for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

WANTED—Improved farms and wild lands. Best system for quick results. Full particulars and magazine free. Don't pay big commissions. Western Sales Agency, Minneapolis, Minn.

FARMS WANTED. We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 32 Palace Bldg., Minneapolis, Minn.

CASH FOR YOUR FARM. I bring buyers and sellers together. If you want to buy, sell or exchange any kind of property or business anywhere write me. Established 1881. Frank P. Cleveland, 2855 Adams Express Building, Chicago, Illinois.

COLD STORAGE

COLD STORAGE is the best way of keeping fruit—everybody knows that. Investigate the Cooper Brine System, using ice and salt for cooling. Superior results over common storage and also over refrigerating machine; reasonable first cost; absolute safety against breakdown. Madison Cooper Co., 110 Court St., Calcium, N. Y.

FOR SALE

SCOTCH COLLIES—Write for prices. Katharine Tack, Rainbow, N. Y.

SEED PAPERSHELL PECANS FOR SALE. F. C. Wilson, Montgomery, Ala.

WELL LOCATED New York Farms at right prices, in fruit section. General stores doing good business. D. B. Low, Canandaigua, New York.

CABBAGE SEED! Direct from the importers. True stock of Danish Roundhead and Ballhead. W. E. Kirchhoff Company, Pembroke, N. Y., for literature and prices.

FARMS FOR SALE

LET US SELL YOUR FARM. No sale—no commission. Many inquiries daily. State particulars first letter. "NISCO"—Department XBK—Cincinnati.

NEW JERSEY FARMS—New Jersey Fruit, Garden, Poultry Farms between Phila. and New York. Especially desirable for intensive farming. Unsurpassed markets, mild climate. List free. A. W. Dresser, Burlington, New Jersey.

"RIVERSIDE"—Sixteen miles from Boston, milk sales \$400 month, 130 acres, cut 75 tons hay, apples, berries, asparagus, three houses, eighty foot barn, 21 Holstein, poultry and outfit included. Owner's address in Illustrated Guide (describing 600 others) postpaid. Chapin Farm Agency, Boston.

REAL ESTATE FOR SALE

SELL YOUR PROPERTY quickly for cash, no matter where located, particulars free. Real Estate Salesman Co., Dept. 22, Lincoln, Neb.

MISCELLANEOUS

HATCHED 96,000 CHIX in 1913 of 14 varieties. Chix and eggs for sale. Tenth season. Catalogue free. Old Honesty Hatchery, Dept. G, New Washington, Ohio.

IDEAS WANTED—Manufacturers are writing for patents procured through me. 3 books with list 200 inventions wanted sent free. Advice free. I get patent or no fee. R. B. Owen, 50 Owen Bldg., Washington, D. C.

GOVERNMENT FARMS FREE. Our official 112 page book "Vacant Government Lands" describes every acre in every county in U. S. How secured free. 1913 diagrams and tables. All about Irrigated Farms. Price 25 cents postpaid. Webb Publishing Co., Dept. 38, St. Paul, Minn.



HEALTH DEPT.

Gold that buys health can never be ill spent, Nor hours laid out in harmless merriment. —John Webster.

In case of a weak heart or flabby muscles, all exercise must be taken slowly and with moderation at first, until increasing strength gives ability for more strenuous exercise.

Disease.

Disease and ugliness enter the body through three channels—bad thoughts, bad air and bad food. By bad thoughts is meant idle, foolish, vain, envious, peevish, scolding moods, which actually poison the blood and show physical evidence in sallowness, headaches, wrinkles, pimples and disorders of the nerves.

Chemistry tells us that stewed fruit is more nutritive than potatoes, is more digestible and acts much more favorably upon the blood, the bones and the brain. Dandelion acts beneficially on the kidneys. Tomatoes are really nutritive and cleanse the blood. Onions excite the gastric juices. Celery is a nerve tonic, and taken daily eliminates rheumatism. The potato has no medicinal properties, but is a valuable aliment if fat is added to it.

Thoughts.

Watch them! Bring wrinkles. Petulance causes them. Worry and suspicion also. Sweep out fretfulness and malice. Change your thoughts to bright things. So will your face show less lines and wrinkles. Your mind also will be less creased and happier.

Simple Treatment for Cold.

The hydropathic treatment of a cold in the head is more reliable than any other, and one which scarcely requires the aid of a physician. It is as follows: In the morning after rising and at night before retiring, wash the feet and legs as high up as the knees in cold water, then rub them with a rough towel and massage them till the skin is red and glowing. In addition to this, snuff tepid water up the nose frequently during the day and sip with a teaspoon, a glassful as hot as can be borne an hour before each meal and at bedtime. A few days is often quite sufficient for simple cases, and obstinate ones yield if the treatment is prolonged. No medicines are required. If taken in the first stages of the disease, a cold is broken up which might otherwise become a severe case of bronchitis lasting many days or weeks.

Work and Health.

Much has been said about the evil effects of over work and the necessity for proper periods of rest. The point has not been too strongly urged; but it must be remembered, at the same time, that the best health is enjoyed only by hard workers.

The athlete's arm attains its size by virtue of the greater quantity of nourishing blood attracted to it by the severe exercise which it undergoes. The mental athlete accomplishes his extraordinary amount of brain work only after years of mental training and effort.

Rarely do the parts thus exercised fail. The neglected functions and organs are more often the cause of the "breakdown."

Work is essential to health. Health in its perfection is found only where both brain and body are active; and it is possible that the keenest health has been enjoyed by the hardest workers in the fields of both mental and physical labor.

Health.

Let me give this paragraph taken from the October number of the Nut Grower:

"Nuts contain little water, a fair amount of protein and a very high percentage of fat. Carbohydrates, which are important constituents of most vegetable foods, are present only in small quantities, except in the chestnut. Most nuts contain about 50 times as much fat and less than one-fifth as much carbohydrates as wheat flour, and have about double the fuel value, or energy producing power. The value of nuts in a strictly vegetarian diet, therefore is obvious, as they form an almost ideal substitute for meat. Some authorities on food values claim that nuts and raisins contain all the elements necessary for human sustenance. Others say that while nuts and raisins contain the necessary food elements, yet they are not in proper form for assimilation. Nevertheless, it is pretty generally admitted that the greater use of nuts for food purposes would result in a material betterment of the health of the people."



The Profits in Progress

Farmers are learning the profitable fertilizer—the one that gives the best profit consistent with maintaining soil productiveness.

Progressive farmers are increasing, for all crops, the

POTASH

in their goods. Results have shown there should be at least as much Potash as Phosphoric Acid, for ordinary farm crops take from the soil from 2 to 4 times as much Potash as Phosphoric Acid. For potatoes, truck and fruit the Potash should be double the Phosphoric Acid.

If your dealer insists on carrying only low grade, 2% Potash goods, we will sell you Potash in any amount from one 200-pound bag up.

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Chicago, McCormick Block Savannah, Bank & Trust Building Atlanta, Empire Building
New Orleans, Whitney Central Bank Building San Francisco, 29 California Street

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Describes Proper Sprayers to Use

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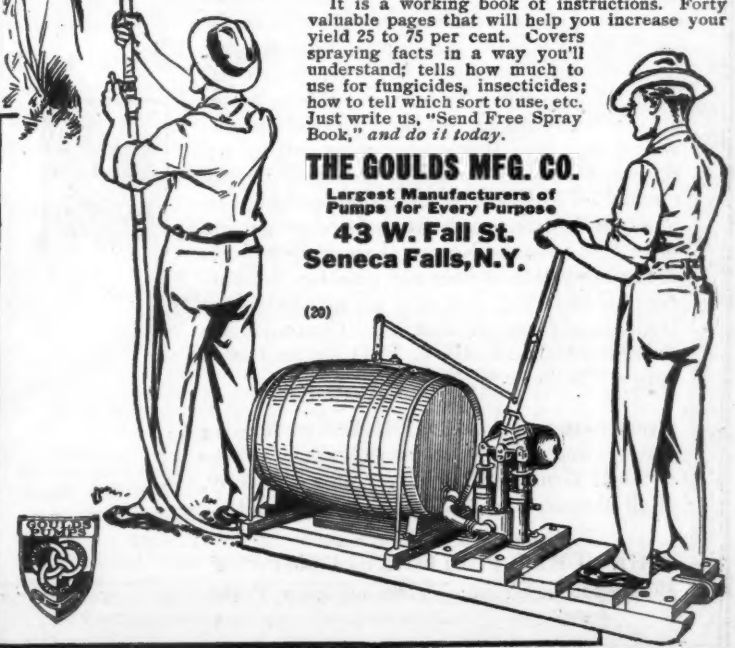
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"Look Beyond the End of Your Nose"

grandfather used to say. A big Florida fruit grower remarked that he had to go to California to learn that he had been wrong for twenty years. So the potato growers of Maine get hints from Colorado; the apple men learn how to cooperate from the orange growers. Here's where the national-farm-weekly idea comes in. If you want to travel north, east, south, west and get your long-distance lessons in money-making methods without spending carfare, look beyond the end of your nose and get the national-farm-weekly habit, and the greatest of these is *The Country Gentleman*.

MORTGAGES ARE AS RARE AS PLUG HATS AND WRIST WATCHES in the Shenandoah Valley of Virginia. For here is the land of \$5,000,000 apple crops—one county shipped more apples last year than the whole state of Oregon; here is the land of pure-bred livestock and great yields of corn and alfalfa. One man sold in the Northwest for \$2000 an acre and became a Virginian for \$100 an acre. Great estates are being cut up, and there's a chance for you if you want it after reading *Along the Shenandoah Valley Pike*, in *The Country Gentleman*.

"WHY STAND YE HERE IDLE?" You have a right to ask that question of your loafing half-dozen acres that seem useless for the growing of staples. But how about the non-staples? The things that are not corn, wheat, meat, eggs, milk? The non-staples, by-products, side-lines (call them what you will) avoid competitive prices because the demand is greater than the supply. For months we have had experts at work on this by-product idea. The result is a series of articles that will make you want to grow something father and grandfather didn't grow; incidentally you will grow something else they may have neglected—a bank balance. This series is in *The Country Gentleman*.

THE DOUBLE-PROFIT FARMER isn't resting on a one-legged stool. He is setting his crops to his livestock and marketing the stock with a chance to make a profit on both. He is growing apples and eggs, or berries and broilers, on the same land on the double-crop plan. He is selling direct and getting both the producer's and the retailer's profits. He is fitting two or three specialties together to get the insurance of diversified farming, and he is safeguarded against total failure because he has three legs to his stool. Double-profit combinations are the backbone of the small place and they are described in nearly every issue of *The Country Gentleman*.

TEN DOLLARS MINUS ONE DOLLAR FIFTY EQUALS WHAT? Service. One of our editors said the other day: "Here's a check for \$1.50 for a year's subscription accompanied by a technical question that will cost us ten dollars for an expert to answer. Where do we get off?" The answer was easy: We don't get off; we get on. And that's why we're getting on. Service. Our three hundred thousand weekly circulation from a little more than nothing two and a half years ago shows that we are getting on. It's service. Nearly three-score experts are at our call to answer any question, no matter how technical, you may ask us about your business of farming. Ask us! Thousands are doing it. Just write the R. F. D. Letter Box in care of *The Country Gentleman*.

Everything about the **BUSINESS** of farming you will find in *THE COUNTRY GENTLEMAN*, the national farm weekly. Five cents the copy, of all newsdealers; \$1.50 the year, by mail.

THE CURTIS PUBLISHING COMPANY
Independence Square Philadelphia, Penna.



Some Good Pears.

At the present day pears are being grown in much greater quantities than in the past. Time was when the getting of produce to market was more difficult than now, and as pears will not keep exposed to air a great while, and cold storage was little understood, the apple was the main fruit tree planted, says Practical Farmer. It still is, and is likely to continue to be, but the pear is now being thought more of than it was. This is particularly the case where facilities are at hand to get the fruit to market quickly. When we remember that much of the fruit of the peach, the pear and similar kinds that are not in the list of long keepers are shipped to us from the Pacific Coast and even to Europe, it shows what can be done in this way. The pear is such a delicious fruit and is such a break from the every-day apple, that as conditions are today it is always looked on as a treat. Aside from cold storage it is not a long keeper, hence the probability of quick sales is to be considered by those who would engage in growing it.

There are long lists of available kinds of pears from which may be chosen sorts to ripen one after the other from early summer to late fall, but in a commercial way the Bartlett leads all as a market variety. This one, in eastern Pennsylvania, ripens in mid-September. Its large, oblong shaped, yellow colored fruit is well known and greatly esteemed. For half a century or longer tree dealers tell us it has been the most popular sort they grow. It has healthy, glossy foliage, thrives well everywhere, bears early, and whether for eating or selling has no competitor.

If marketing were the chief consideration it is probable that the Lawrence would be chosen for a late pear. In

well planted in autumn or in spring, but when severe winters are to be encountered it is best done in spring. The pear may be considered a fruit suitable to all parts of our country, if we except Florida and its adjacent states.

Corns or Horses Bruised Sole.

The different kinds of corns are: 1. Dry corns. This corn is dry and seldom causes lameness. 2. Suppurating corns. Considerable pus is formed causing lameness. 3. Chronic corns. This corn is either soft, moist or lardy and there is an intermittent lameness aggravated by improper shoeing, says Farmer's Guide.

Some feet are predisposed to corns, viz., narrow, deformed hoofs, deformity of the limbs, badly trimmed, wide, flat feet, excessively weakening the sole bars and frog, permitting the toe to grow too long, shortening one quarter too much, so that the foot is unbalanced, shoeing a heavy horse with too light a shoe, thus permitting the shoe to spring down on the heel. Permitting the feet to become too dry and brittle, thus reducing the elastic properties of the horn. Nailing the shoe too far back, thus preventing the natural spread of the hoof, when placed upon the ground. Applying the shoe too hot while being fitted. Insufficient concavity of the shoe in flat feet. Horses which have never been shod rarely have corns, thus proving that corns are due to errors in shoeing.

First, remove the cause by paring the hoof to the proper angle; shorten the toe and cut down the quarters if too high. Put on a level shoe. If calks must be used, use both toe and heel calks, never toe without heel, nor heel calks without toe, unless for a special purpose. A leather sole should always be used under the shoe and place a dressing over the



Picking pears at the farm of T. Pawley, near Medina, N. Y. These pear trees have been allowed to grow too high. The best pear growers of today cut back the new growth each winter on both dwarf and standard pear trees. If this cutting back of the new growth had been practiced by the owner of the above orchard his trees would have been more handsome in appearance, more productive and more easily sprayed, and the fruit could be more easily gathered.

appearance this variety differs greatly in the character of its growth. Its leaves are small, its branches slender and numerous requiring thinning out at times. But its fine flavored fruit, good bearing character and lateness of ripening, make it a favorite. Its season is late October; and if placed in a cool place they keep well until Christmas. In a commercial way the Kieffer must not be overlooked. Though not to be despised as an eating fruit freshly ripened, it is as one for preserving its claims lie. For canning it is grown in large quantities, and then its fruit is often passed off as Bartlett, but it is coarse grained and not as sweet as the Bartlett and with perhaps more juice.

For home use there are many other pears which should be planted. There is Clapp's Favorite, a most beautiful, large, early sort, ripening in August. It is juicy, and of excellent flavor. Unfortunately it cannot be kept very long, decaying at the core if attempted. The best way is to gather it before fully ripe, keep it in a close room for a week or two, then use it at once. When first introduced, so esteemed was this pear that Mr. Clapp, who raised it, was offered a thousand dollars for the stock, but he preferred to have his own name given it, and to have all the credit for its introduction.

If we start a list of pears to ripen in succession for the home garden, the list might follow in this way: Clapp's Favorite, Bartlett, Howell, Seckel, Duchess, Anjou, Sheldon and Lawrence. The Kieffer, which as aforesaid, is more for preserving than for eating out of hand, ripens in October.

Pears do well in good garden soil as is evident in the many examples. They thrive best of all in deep soil, but when the subsoil is of a clayey nature it causes an astringency in the fruit. Pears do

sole of the following mixture: pine tar, 8 ounces; Venice turpentine, 1 ounce; spirits camphor, 1 ounce; compound tincture benzoin, 2 ounces. Mix and smear plentifully over the sole after which apply oakum and the leather pad.

When there is a suppurating corn, the shoe should be left off for several days and drainage for the pus established. Pouches of flaxseed should be applied in which has been placed about two ounces of creoline. When the lameness has been removed, the horse should be carefully shod, using a bar shoe with a leather sole, and the above dressing. The after-care of the hoof consists in keeping it cool, moderately moist and pliant.—R. E. Mitchell, San Francisco Vet. College.

There are about 37 pines native to the United States, of which 25 are western species, and 12 eastern.

Must Spray to Have Sound Fruit.

The man who still clings to the idea that spraying does not aid in the production of fruit should be convinced by the report of W. L. Howard of the department of horticulture of the University of Missouri. By taking orchards here and there over the State of Missouri, Professor Howard has just finished a series of experiments that show that practically all unsprayed fruit is ruined by diseases or insects.

In one orchard where a part was sprayed and a part was left unsprayed, only 1.2 per cent. of the Arkansas Black apples could be classed as clean fruit after the trees had been left unsprayed. In the same orchard, where the same brand of apples had been sprayed, the crop of clean fruit was 76.6 per cent. Another orchard of Missouri Pippin apples experimented with the same way, resulted in 2.1 clean fruit for the unsprayed part and 88.5 for the part which was sprayed.

A Western Fruit Ranch.

Written for Green's Fruit Grower, by Warren Ferde Wilcox, Colo.

The Inquirer visited one of the fruit ranches in western Colorado at an altitude of 6,000 feet. It was at the time of the apple harvest.

The trees were carrying about as many apples as they could safely hold despite reports to the contrary during the summer. The pickers were busy. Rows of boxes extended along the rows of trees. The trees were running from 23 to 30 boxes per tree. Not a bad yield!

The Inquirer noticed something strange about the manner of pruning the trees. The trees are large and spread out with strong branches stretching out from all sides of the trunk, and yet the trees appear to stand high. The branches, that in most orchards appear to be free from small shoots near the base, were numerous here and were filled with large apples.

Asked regarding this, Mr. Smith said: "We trim our trees differently than a good many orchardists. No two varieties, of course, are exactly alike and we do not trim them alike. As a general rule we clip off the extreme tips of the main branches and we let most of the slips grow on the heavy part of the branch where it is strong to carry an apple without noticing it and yet leave the branch of ample strength to support a large quantity of apples further out on the limb. We find that we get a good many apples in this way that other orchardists do not secure. In many orchards you will find that the pruner has cut off all the little shoots on the main branches of the tree and it is perfectly smooth for several feet out from the trunk.

would be dented and culled if allowed to fall on hard rough ground."

The Inquirer learned after other visits and by driving about the country that a great many orchardists are sowing red clover in their orchards.

Another matter presented itself. As the Inquirer had noted a great demand for hogs to be turned into orchards after harvest to pick up the culls, he said he supposed that hogs would be turned into the Smith orchard as soon as the picking was finished. Imagine his surprise to learn that a hog is never allowed in the orchard. The manager declared that the damage the hogs would do the trees would be greater than any benefit or gain derived from feeding on the waste fruit. He declared that it was the nature of hogs to wallow in the mud and dirt and then to rub and scratch on the trees. This rubbing places a coating of mud about the trees for two feet above its base. This closes up the pores in the tree and prevents the breathing function from being carried out and the tree is often seriously injured. Just as the life of a human being is impaired and terminated by closing the pores of the skin, so is the health and life of the tree damaged by closing its pores with mud. Thus no hogs run in this orchard, although they are usually allowed in many orchards.

The Inquirer noticed at the packing shed that the boxes used had a couple of red cleats across the end. Upon inquiry it was discovered that this is a matter of advertising. On the end of the boxes is stamped "Red Cleat Brand." The manager said it was for a purpose. It doesn't cost much to stain the cleats red and when the fruit is on the market and purchased and the consumer likes the grade, he will invariably go back to the



Irrigation of an apple orchard.

"We received this idea from the man who formerly owned this place and we have never had reason to abandon its practice. On the other hand we are encouraged to keep up the plan. When we were pruning last winter one man said we were ruining our trees for fruit because we were clipping off the tops of the branches. But I have demonstrated that by clipping off the extreme ends of the limbs we have made the tree and its limbs stronger to carry the burden of the fruit when it is fully developed. Trees like these can grow a very heavy crop and yet not have to be propped up with stakes when the apples bear down upon them."

The Inquirer noticed that the ground beneath the trees in the Smith orchard was not clean as in most orchards but was covered with a dense growth of red clover somewhat trampled and matted down by the pickers, wagons and other exercise about it. The Inquirer thought that perhaps the manager was somewhat negligent about allowing this growth in the orchard to draw from the soil strength that should go into the trees. Upon inquiry he was informed:

"A fruit tree does take a great deal of strength from the soil, and unless it is replenished the orchard is not able to do as it should. Small fruit will be the result and the percentage of marketable apples will be small. Red clover is the finest fertilizer that I know, the foliage produces an abundance of humus that is very effective after lying on the ground during the winter and decomposing. It also serves to catch the leaves that fall from the trees and utilizes them for mulching. In clean cultivated orchards these blow away and their fertilizing power is lost. The clover matting serves also to protect the apples that may blow off the trees, keeping them from bruising. In this way many are saved as firsts that

dealer and ask for more "Red Cleat Brand" apples. This is an individual manner of advertising and distinguishes the Smith ranch fruit from all others.

The Smith fruit ranch also carries insurance. That sounds strange, but in the barn are 2,000 oil pots orchard heaters commonly called "smudge pots." In the spring the pots are gotten out and placed throughout the orchard at the proper distances and filled with oil. If needed they are ready to be lighted at the moment the temperature drops to the danger point. If they are not needed all right.

And so it goes. The Inquirer learned a great deal about the fruit business by just using his eyes and asking a few questions now and then.

Some little things that do not seem to amount to much really amount to a whole lot. The orchard, of course, is irrigated for it lies in the desert land where there is not sufficient rain fall to grow anything other than grease woods, sage brush, salt weed and cactus. But by diverting the mountain torrents from their mad flight to the ocean, water is applied to the parched soil and it really blooms like the rose. The mountain peaks, always clad in white, literally milk the clouds, and man with marvelous engineering skill brings the water to the fertile valleys and mesas. The Smith ranch is under the great five million dollar Gunnison tunnel and canal.

Editor Green's Fruit Grower:—I am a subscriber, but want trial subscriptions for distribution among my neighbors here, as I do not think any agricultural paper can compare with yours, and am sure there is no horticultural magazine that can approach it. Thanking you for the good things in former numbers and those to come.—E. Angermann, National City, Cal.

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"The Masterpiece of the Largest Makers of Two-Cycle Engines in the World."

The astounding success of Gaso-Kero two-cycle kerosene engines is based upon the perfect Bessemer Universal Fuel Feeder, controlled exclusively by us.

The Wonderful Bessemer Gaso-Kero Engine

This perfect fuel feeder has sounded the death knell of carburetors, and is the only thoroughly successful device for feeding kerosene, gasoline, distillate, etc., without chance of misfiring. It is revolutionizing the engine business. It is the one big, right idea we discovered and control it—you cannot get it in any but a "Gaso-Kero," "Gaso-Kero" two-cycle engines are simple—only three moving parts—are constant and steady as clocks. 2 to 200 H. P. Immediate shipment.

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picks the choice fruit that's "out of reach" without bruising it in the least. It soon saves enough fruit to pay for itself.

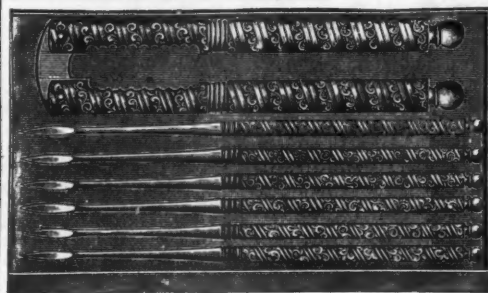
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Bastian "Oregon" Orchard Tools are made of the very best materials; they are powerful, durable and handy to use. Reasonable in price and guaranteed. Made in all lengths. If your dealer has no Bastian "Oregon" Tools in stock, do not accept substitutes, but write to us and we'll send prices and name of nearest dealer who can supply you, or we'll ship direct. Write now for descriptive circular.

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A Beautiful Nut Pick Set



This is both a useful and an elegant premium. The set consists of a handsome and strong nut cracker and six individual nut picks, all in a neat and durable case. Both the nut cracker and the nut picks are made of the very best steel, are beautifully designed and heavily plated. They will be a real delight to you and your guests. The handles of the nut picks are made in a pretty design, while the points are highly polished. The nut cracker is of a design corresponding to the nut picks and is made for good strong service. A set should be in every home. Of course you want one.

How to get one of these Beautiful Sets: Send us four new subscribers to Green's Fruit Grower at the special low price 80 cents each per year and we will send you the Nut Pick Set charges prepaid.

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32 Styles 1 to 8 Burners

You Who Know Angle Lamps! Tell About Them

If you know any woman who cleans and fills lamps seven days a week instead of one day a week—who has the bother of odor, smoke and undershadowed light—it is because she does not know about the Angle Lamps.

If you do know you ought to tell her. If you do not, you should read this letter: "I have used all forms of gas and electricity, but for a rich mellow light with utmost illumination and no shadow, the Angle Lamp still leads."

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Sixteen hours of perfect light from one quart of oil—easy to care for—simple to operate and free from danger of explosion—that is the Angle Lamp.

In writing for large catalog (illustrated) please mention No. 2.

The Angle Manufacturing Company,
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We want to interest orchardists who fully realize the advantages of possessing an efficient and effective sprayer. Every Domestic outfit is constructed to fulfill every requirement of the commercial orchardist. The engines and pumps on all

Domestic Sprayers

can be stopped, lifted and adjusted while standing on the ground beside the outfit. Each outfit is as light in weight as allowable to carry an engine with sufficient pressure power to pump enough liquid for fog or more nozzles. Other important features are fully explained and illustrated in our free book, "Made Money by Spraying." Write for copy. DOMESTIC ENGINE AND PUMP CO. Box 500, Shippenburg, Pa.



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Kill San Jose Scale, Aphids, White Fly, etc., by spraying your trees with **GOOD'S CAUSTIC FISH OIL SOAP No. 3**.
Sure death to tree pests. Contains nothing injurious to trees—fertilizes the soil. Used and endorsed by U. S. Dept. of Agriculture.
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Now 60 Days Trial Is The Only Safe Way To Buy Anything For Rupture

Here is something absolutely GUARANTEED to keep rupture from coming out—something that does away with the misery-causing leg-straps and body-springs.



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A Spitzenburg Apple.

I am pleased to receive the above photograph of this old favorite apple. In past years the Spitzenburg was more frequently planted in western New York than at present. It has been in the past considered one of our fancy varieties, beautiful in shape and color and of a peculiar flavor possessed by no other variety. For myself personally, I have not favored the Spitzenburg as an eating apple, though I have recognized the high flavor of the variety.

The fact indicated by this photograph that the Spitzenburg can still be grown in western New York to perfection, would be a surprise to many, for there are those who have thought that the days of the Spitzenburg were past.

Photograph on this page represents what the Spitzenburg apple can do in New York state under proper conditions. Glenn H. Tinklepaugh, of Sodus, this season shipped one carload of the finest grade of fruit from his large farm near Lake Ontario. The accompanying photo shows

profitably too, in New York, each plate will be labeled, "Grown at Sodus, N. Y." The trees have yielded a profitable crop for the last nine years, and are a great pride to their owner. On this farm are over 9,000 trees, varying in age and variety. Orchards are set out to peaches, pears, cherries and apples, principally. One orchard is at least 75 years old. Another of two-year-old peaches promises to produce next season. About 2,000 young trees will come into bearing next year.—Alvah H. Pulver, Sodus, N. Y.

How far off is to-morrow? It may be a day off or a month off or a year.

To-morrow may never come. Do not put off until to-morrow the making of your will or the doing of a kind act.

Is there anything more to be learned about farming or fruit growing? Thousands of editors and thousands of printers have been working throughout the past fifty years or more in telling farmers what to do with their land in order to make it



A Marvelous Spitzenburg Story. Apples grown at Sodus, N. Y., on farm of G. H. Tinklepaugh. Owner in picture at right.

Mr. Tinklepaugh standing near one of his trees where the fruit literally "sticks all over" and with but greater scope of camera still more of the delicious fruit could be shown. The showing has attracted wide attention. Dealers and buyers in stopping at the farm have pronounced the showing as the best seen in the state. A generous sampling of five barrels of the fruit has been shipped to Chicago, there to be displayed on plates at the mid-winter show. As announcing to all the world that the Spitzenburg variety can be brought to the barrel, and

more productive and profitable. Is it possible that anything more can be said or done to help the farmer? Yes, a lot more can be said and done. The trouble is that thus far the advice given farmers has not been accepted.

One Apple a Day.

"One apple a day keeps the doctor away." This precept sounds good and is good, but candor compels me to say that it is not absolutely true. It would be safer to say that one apple a day will help to keep the doctor away. There are many other things that will help to keep the doctor from tapping at our door, and will keep him from sending us distressing bills for very helpful services.

Apples are more easily digested than pears or plums. I mean ripe apples, for unripe apples are not fit for human food nor for pigs. There are people who have formed the habit of eating an apple just before retiring at night. I have myself eaten apples at 9 o'clock P. M. but do not recommend this to all the readers of Green's Fruit Grower, for there is a difference in human stomachs. The safe thing to do is to eat nothing after the evening meal, but if the stomach will receive an apple at 9 P. M. without discomfort, an apple may be wisely prescribed at that hour.

Apples are substantial food. A hungry man camping in the woods, away from the grocer and baker and the pie-maker, may if he has a half dozen good ripe apples, make a satisfactory meal from this delicious fruit, and may thereafter tramp about without weariness or without a befogged brain such as we all are liable to have after a Thanksgiving or Christmas turkey feast. The apple clears the mind

and clears the stomach, while meat befuddles the mind and clogs the stomach. The apple in common with most fruits is a germicide more effective and agreeable to take than some of the germicides recommended by physicians.

I notice that the well-to-do city man is more and more inclined each year to purchase of some reliable farmer a barrel of extra fine Spies, and a barrel of Hubbardston or King or Baldwin as he may fancy for his own eating during the winter. Some of these men are even coming to learn that there are varieties of superior quality to those I have named, such as Banana, Melon, Mother, Shiawasse Beauty, McIntosh Red, Dessert and Delicious, but the doctor across the way from this city man may look with alarm upon the invasion of his territory by such healthful food as apples; that is, a doctor may feel this way if he is of a vicious mind. We trust he is of the other kind, wishing only for the good of his neighbors and the public at large without regard to his anticipated fees.

The Pre-Cooling of Peaches.

In seasons of full crop, the grower sometimes complain of unsatisfactory prices. This is largely because of unsatisfactory handling by the transportation companies through not having adequate refrigerator car facilities, but also largely because suitable pre-cooling means are not available. Pre-cooling means cooling before shipping, and the prefix "pre" before the word cooling in this connection means that the fruit should be cooled quickly after picking and before what is the usual period of cooling during transportation in a refrigerator car. Pre-cooling is necessary because refrigerator cars cannot possibly cool the fruit in a satisfactory manner because the cars are imperfectly insulated and the means of cooling insufficient. If peaches are thoroughly pre-cooled to a reasonably low temperature before loading into refrigerator cars they are, if not delayed in transit, practically insured against damage while going to market. Very few pre-cooling plants have been established as yet, although much experimental work has been done and much pre-cooling talk has been indulged in. Pre-cooling plants cost money, and as the railroad companies have not seen fit to take the matter up systematically, and as the growers and shippers have not been financially able in most cases to provide suitable pre-cooling facilities, there is still a great loss of fruit through decay and deterioration before and during transit and after arrival on the market. If the weather is unusually warm this results in heavy losses to the owners of the fruit.—Cold.

Watching Trees in Winter.

There is not much to do in the orchard until towards spring, but the successful fruit grower keeps his acquaintance with the trees all winter. In every orchard there are trees that require attention in the off season. There are dead limbs to be removed, and sometimes the whole tree should be rooted out, says Farm and Press, and the ground prepared for a new tree to be planted in the spring.

Some farmers object to putting in a tree where one has been removed, but it is better to look to the cause. If the sickly tree was young, the fault may have been with the planting, or the tree itself, but usually there is a fault with the soil or drainage.

In one orchard the trees refused to grow on a strip of ground near a drain ditch although the trees were doing fine in every other part of the orchard. The trouble in this case undoubtedly is faulty drainage. A dynamite blast in each tree hole might correct the difficulty. Apparently the trouble is not in the main drain, because there is a fall of several feet. In fact, the drain is in the bottom of a small ravine deep enough to insure a low enough water table to insure the growth of trees. There are such spots in many orchards.

The late fall and winter is the time to figure out the cause of the trouble and to apply proper remedy. Vacant spaces in an orchard cannot be tolerated. The land is too valuable.

Feeding Dairy Cows.

Prof. Haecker has prepared an extremely valuable bulletin on feeding dairy cows. Its purpose is to "boost" the dairy interests of Minnesota by promoting an increase in the production of milk and butter fat. It is shown that, whereas the average amount of butter obtained from a Minnesota cow is now hardly 160 pounds per year, it can be methodical feeding be increased 20 pounds or over, which would mean a gain to the farmers of Minnesota of many millions of dollars annually. Tables are given, by the use of which the proper ration for every cow may be easily determined. A study of the bulletin will mean dollars in the pocket of every owner of a dairy herd.

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Gathering Apples From Trees 100 Years Old.

Written for Green's Fruit Grower by John E. Taylor, Maine.

An apple tree is like a person and holds its usefulness in old age accordingly. An old orchard is not supposed to be as good as an orchard younger but if a farmer has an old orchard it behooves him to care for it as he will derive profits that will well pay him for his trouble.

There is a farmer in Maine who has several trees on his farm that are 100 years old. The most of them are of the Tolman Sweet variety and from one tree during the past season he gathered seven bushels of Tolman Sweets that he sold for \$2.50 a barrel. This tree shows considerable vitality and shows no sign of dying. From another tree of the same age which during the last few years he has kept trimmed, he gathered 12 bushels of Tolman Sweets during the past season.

Editor Green's Fruit Grower:—In your October issue I find an article treating the question of the freezing of tree sap, etc.

The following facts may be interesting in connection with that article. When taking up onions in the fall there are many small ones, the size of a peanut, or less, which get lost in and on the ground. When fall rains begin these "lost" onions start growing if the root end is in contact or covered with earth. When heavy freezing comes, the top suffers more or less, but the bulb remains alive and vigorous although the earth may be frozen a foot deep. And when spring approaches these "lost" onions furnish the very earliest "scallions." On the other hand

His trees will be more vigorous than on their own roots.—Wm. M. Clark, Neb.

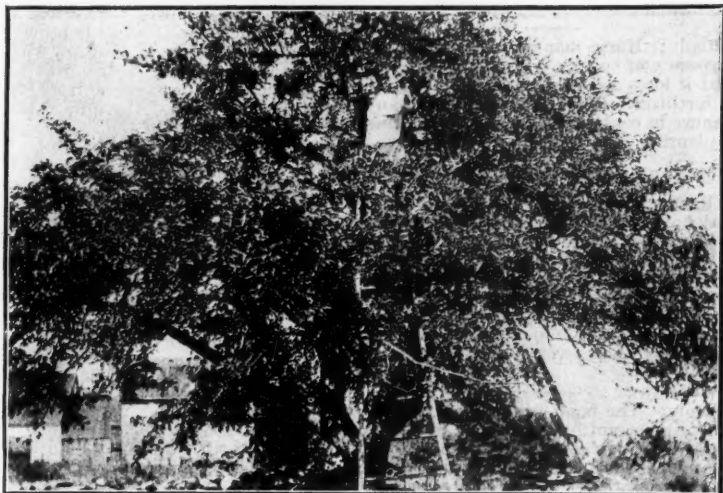
Walnuts in Arkansas.

Mr. C. A. Green:—I have been reading the Fruit Grower for the last twenty years. I am now sixty-five years old and retired. I wish to build a monument for myself by starting a soft shelled walnut grove in the hills of Arkansas. I read in your paper a year ago that walnuts were hardy in your climate. Can you tell me how I can get about 1000 nuts? I want them to plant a year from now. An Italian told me that walnuts grow in the north of Italy at the foot of the Alps at 46 degrees below zero. Can you not take this up with the Department of Agriculture at Washington and have these nuts introduced into this country? I think the hills of Arkansas would be an ideal place for them.—Frank Krahn, Oklahoma.

PRICES FOR APPLES AND POTATOES Government Condition of Both Crops is Low.

Small crops of both apples and potatoes were indicated, with the former showing up much lighter than the latter. The total crop of apples in the United States was estimated at 70.4 per cent., while the total crop of potatoes was placed at 81.3 per cent., says Post Express.

Apples in New York state turned out unusually light, the crop estimate being only 34 per cent. Other states reported the following apple crops: Maine, 47 per cent.; New Hampshire, 40 per cent.; Vermont, 24 per cent.; Massachusetts, 55 per cent.; Rhode Island, 72 per cent.; Connecticut, 70 per cent.; New Jersey, 57 per cent.; Pennsylvania, 43 per cent.;



An apple tree 100 years old in Maine that is still bearing a good supply of Tolman Sweets each season and last season produced seven bushels.

these onions which have no root growth become frozen and rot away very promptly. Herein appears some evidence that "vital force" plays a most important part in maintaining ability to live and—in time produce seed for the perpetuation of the onion.

Again, I will assume that chick weed is well known, I may say too well known to be liked. It will be remembered that it is green, fresh and blooming as early as the snow melts down enough to let it peep through. It is almost impossible to kill the pest when the ground is not real dry, or in the fall when most weeds become more or less dormant. The roots being very numerous and thread like, it is next to impossible to so uproot it that not a single thread reaches into the soil, but if this is not accomplished the plant will withstand almost any kind of freezing and remain green and ready for business. But make sure the plant has no root connection with the ground, and the plant freezes, shrivels and dries up like any other weed.

While I have no experiments to prove it, I yet believe there is a continuous circulation of sap (so called) in all perennial vegetable growth,—and also in biennials more or less. For that reason I believe it better to defer trimming grape vines, (and other severe trimming), until very late in the dormant period, to give the plant the benefit of this circulation and the consequent, probable metamorphosis as long as possible.

Could the sap be isolated and obtained at various periods and in sufficient quantities for chemical analysis, much might be learned of the secrets of vital resistance and growth.—C. D. C., N. J.

Walnuts.—Tell Mr. John H. Dreffien, who proposes to plant a 40-acre farm in Ottawa Co., Michigan, to nuts, to plant this fall our common black walnuts (two or three) where he intends his English (or Persian) walnut trees to grow. Allow only one—the best—to grow and when it is 5 or 6 feet high bud or graft with the variety of English walnut he desires.

Millersville, Pa., Oct. 18, 1913.

Mr. C. A. Green, Editor:—I want your Fruit Grower, it is a very helpful paper. I can hardly wait from one issue to another to see what is new in it. I am introducing it to all interested in fruit. It is an up-to-date paper for all classes of people who are willing to take advice. I enclose subscription, 50 cents.—Ephraim F. Manning, R. F. D. No. 2.

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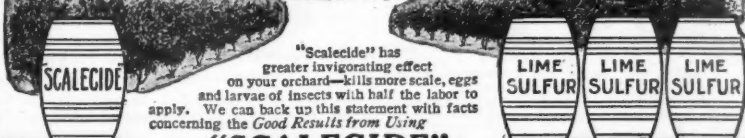
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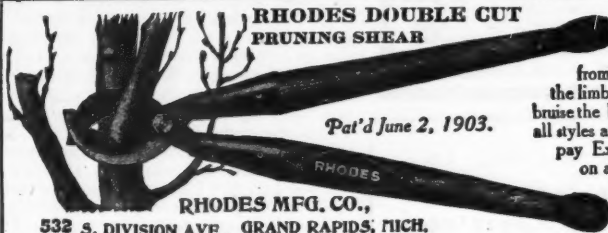


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Write to Mr. A. L. Rice, Manfr., 16 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.

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Letters From the People.

"Prudent questioning is the half of knowledge.—Proverb.

Spur Pruning Grape.

Mr. C. A. Green:—I have read concerning Clinton grape, that it required spur pruning on old canes for best results. Could you explain in the next issue of your excellent Fruit Grower what spur pruning on old cane means?—Alfred Marzorati, N. Y.

Reply: I assume that spur pruning on old canes of any grape vine means leaving on the old wood many spurs of new canes of the present season's growth, each spur containing three buds. Most grape vine pruning consists of spur pruning somewhat modified by leaving new canes occasionally to lead off to cover the wall or trellis, the new canes having occasional spurs or short pieces of new canes left on them with three buds to each spur.

To Prevent Injury From Rabbits.

Mr. C. A. Green:—I wish to inquire whether a preparation of melted tallow, pine tar and a small amount of carbolic acid applied to young fruit trees to prevent injury from rabbits will injure the trees.—L. E. Ambrose, Arkansas.

Reply: I have no experience with the preparation you speak of. I have heard that anything like flesh or blood is shunned by rabbits and is distasteful to them. I would not dare apply any kind of grease or tar or paint to the bodies of my young fruit trees as such material might injure the trees. I can think of nothing better than to shoot the rabbits or to cover the trunks of the trees with thin strips of thin wood called veneer, or fine wire mesh, which can be wrapped around the trees like stiff paper.

Orchard Injury.

Green's Fruit Grower:—On the evening of September 30th ult. this section was visited by a fearful hail storm—the worst ever known in this locality—that did an immense amount of damage to apple crop and to fruit trees, especially to the young fruit trees. I have a three-year-old apple orchard of fifty-three acres that suffered severely. Not a whole leaf was left on a tree in the whole plantation, and the whole was practically defoliated. The storm came from the southwest, and that side of the limbs and branches are badly barked and skinned; the trunks bruised but not laid wide open, only the bark cracked. As a consequence of this injury the trees are leafing out some on the southwest side and most of the winter buds are much swollen. Should warm weather continue, I fear all buds on southwest side will be too far advanced to get through the winter. My trees were a splendid lot of thrifty huskies, a second before the storm and I was certainly proud of them. Will Prof. Van Deman be good enough to help me over a rough place—as he has helped so many before?—R. L. Campbell, Va.

Reply: This terrible bruising of the bark is a serious injury to the trees but it is wonderful what nature will do to heal the wounds in a short time. A coating of paint would be very good but a touch with a brush dipped in melted grafting wax would be even better. Either will keep out the spores of fungus diseases that are apt to find lodgment in the bruised places and the sooner and more completely they are shut out the better; nothing of the kind will in any degree prevent the growth of any dormant buds that nature may force out to take the place of those injured.

Stable manure should be scattered about under the ends of the branches and not placed near the bases of the trees, for it is liable to be too strong in nitrogen and injure the bark of the trunks and larger roots.

Locating in New York State.

Mr. C. A. Green:—I am thinking of locating in New York State and would like some information about the country. At present prices, is dairying paying a living profit, say in Cortland county? Do all crops require commercial fertilizer and what is the cost of same? I find farms for sale in Cortland county at about what the buildings would cost. Is it much trouble to get a good stand of timothy and clover? Everything considered, what is the best part of New York state for general farming, taking prices into consideration?

Your paper, of which I have been a subscriber for several years, gives me much pleasure and information.—J. C. Parsons, Iowa.

Reply: I do not advise you to buy a cheap farm in New York state. I would prefer to buy a good farm at from \$100 to \$125 per acre. I would buy in a fruit growing district. There is no better soil in the world than that around Rochester, N. Y. A subscriber has come here from Oklahoma and bought a farm at \$150 per acre, or less, suitable for fruit growing, and will buy another farm next spring for that purpose. Lands seem to be cheaper around Rochester than they are in many portions of the west or middle west where fruit can be grown. I advise any one about to buy a farm to make a careful search and not be too hasty in buying. Never buy a farm until you have seen it and until you have consulted with the neighbors and learned about its productiveness. Pay particular attention to the condition of the buildings, since putting up new buildings is marvelously expensive at this time. I know of a farm near Green's Fruit Farms that was offered last spring at less than \$100 per acre, a splendid farm with good buildings.

Burning Brush.

Editor Green's Fruit Grower:—I have a small garden and would like to know if it is advisable to burn brush on it and leave it to be plowed under.—Geo. W. Erb, Nebraska.

Reply: Yes, burn brush in the garden but be careful to scatter all of the ashes, otherwise the place where you leave the ashes will bear no crop.

Manure and Fruit Trees.

Editor Green's Fruit Grower:—Let me know in your next issue if horse manure is good to put in with other fertilizers to plant fruit trees in.—Jack Bronsert, California.

Reply: Horse manure is good for the purpose you specify. If it is allowed to heat it loses a large portion of its value as fertilizer. Be careful not to get any manure in contact with the roots of trees at planting.

Peach Inquiry.

Green's Fruit Grower:—I have a pond that holds water throughout the season. It has water diameter of nearly 100 feet at the time the peach blooms. The ground is raised around the outside. Would this water afford any protection to the fruit buds if trees were set on this ground? We do not get full crop of peaches oftener than one year in seven.—W. B. Howland, Ohio.

Reply: The pond is too small to furnish any perceptible protection from late spring frosts or any effect in moderating the temperature during winter. Water that is frozen over during winter cannot moderate the temperature. When not frozen over in early spring it would have some effect on the temperature but too slight to be noticeable.

Building a Small Fruit House.

Green's Fruit Grower:—I wish to get some information about the best way to put in a house for keeping from 50 to 100 bushels of apples. I have a steep side hill for site and can easily dig a place for a lean-to. Or is it a better way to build a shed with two thicknesses of siding with air space between?—H. H. Ashenden, Conn.

Reply: I advise excavating into the side hill and building of cement or plank a retaining structure to prevent the soil from dropping into the cellar. The lower part of the cellar floor will be on a level with the ground outside. This can be roofed over cheaply, the roof to be covered with some of high grade tar roofing material, which can be purchased almost anywhere in rolls. The structure can be made enduring and somewhat expensive or it can be made very cheaply. The building need not be made frostproof, for after you have placed in it your apples you can, when danger of freezing occurs or earlier, the later the better, throw bundles of cornstalks or straw over the barrels, which will keep the fruit in ideal condition during the winter, and yet they can be taken out at any time during the winter or late spring.

I have known apples to be kept by placing in barrels, old barrels are as good as any, and burying them in the ground after excavating a hole at least half the width of the barrel when lying flat upon the ground. I have also known apples to be kept by excavating slightly and piling the apples up in the pit, covering them with straw and then lightly with earth, adding more earth as danger from freezing occurs. Remember that the secret of keeping apples in winter is to keep them continually as near the freezing point as possible without actually freezing. If the apples are in barrels it will do no harm if the thermometer drops a few degrees below freezing point.

I have known apples to fall from the trees and be partially covered with leaves,

to remain thus all winter and to be found in good condition the next spring. I assume, however, that these apples received additional covering of snow during the winter. I have known apples to be frozen and to come out in good condition, but it is not safe to allow them to become frozen. Should they freeze do not move or disturb them until the frost has come out, and allow the frost to come out as slowly as possible.

About Quince Culture.

Mr. C. A. Green:—Kindly tell me through your paper something about the culture of the quince. I have a piece of gravelly or sandy loam land, well drained and highly manured. Do you think it profitable to plant to quince?—J. Freedham, Tenn.

Reply: The quince thrives on almost any soil that will grow corn, wheat and potatoes. Contrary to the opinion of some the quince tree like other fruit trees does not like wet soil or soil that needs draining. The quince is in addition to its fruit an ornamental bush or tree. When grown in the bush form it is perhaps more productive and reliable than when grown in the tree form, but in either way it is generally productive of large and handsome fruit.

Quinces are not so largely in demand as other staple fruits. There are many families who can use a peck of quinces but not many who would want them by the bushel. This is one reason why the quince is not more largely grown. In the neighborhood of Geneva, N. Y., there are large orchards of quinces, which, I am told, have proved remarkably profitable. This year quinces have been lower than in many previous years.

The quince tree will thrive and bear fruit without cultivation as is proved by the fact that we see it growing without cultivation along the hedge row, along the garden fence, or wherever it may have been planted. But if the quince tree is given good cultivation the result will be larger and more marketable fruit. The roots of quince trees are more sensitive to injury by frost during winter than most trees. Where the quince is grown in sod the sod offers a winter protection to the roots. Where the quince is grown in cultivated soil it may be well to mulch the ground lightly as winter approaches to protect the roots, though the roots might not be injured so far north as western New York in ordinary winters even with no protection.

I would not advise planting the quince so largely as the apple, peach, pear and some other fruits, but no fruit farm is complete without it and no home is complete without a few bushes of quinces.

More Gfrees.

Mr. C. A. Green:—I notice in a late copy of your magazine a short sketch under the heading, "Are We Related?" This leads me to write you that I have in my possession a short sketch taken from the bible which was brought to this country by the brothers referred to, which states that they left Aukley Hall, England, in 1630, and settled in Warwick, Rhode Island. Built the Green stone castle in 1675-6. Their names were Peter, James, John and Thomas. There was one sister by the name of Mary, who married a man by the name of Reynolds. I took this statement from the bible brought with them, which was printed in 1626.—L. W. Green, N. Y.

Plums and Peaches.

Mr. Green:—I feel so well pleased from the information obtained from you I wish to thank you and tell you the results. In the early spring I wrote to you for information in regard to my Bradshaw plum trees that blossomed full every spring but did not fruit. You informed me if I cut with the point of my knife around each limb it would make them produce fruit. Although I did so I had little faith, but I have just picked 2 bushels or more, which is more than I have ever picked from the trees for 12 years all put together. Twelve years ago the trees were covered with black knots. I cut all the large limbs off to the trunk of each tree and burned them; since then there have been no knots. I speak of these knots that if your readers have trees covered with black knots not to pull up the trees but do as I did to mine.

I am so well pleased with the results on the plum trees I wish to be informed what to do to my 3 year old seedling peach tree. It bore 60 peaches for its first crop. I wish to know why most of the stones were split open and the seed had disappeared and the inside of the stone black and moldy.—S. H. Warren, Mass.

Reply: The pits of peaches are often split open and come apart when the peach is cut. Sometimes the pit is moldy. I know of no particular reason why this should be so. Thanks for your interesting letter.

Little Helps by the Way.

But though fierce blow the winds through forests
shrouded,
Where snows for leafy verdure, cheerless cling,
Though seas moan wild, and skies are darkly clouded,
Within the heart that loves 'tis always spring!
These memories and hopes, fresh budding, throng,
And faith forgets that winter lingers long.
—Florence Earle Coates.

MIRACULOUS HARVESTS.

Twenty Seeds of Grain Yield an Increase of Over 700,000, and That Within a Year.

"The principle is simple. It consists in preparing seed-beds in widely spaced lines on very mellow land; then at the end of two months dividing the tufts springing from each grain, replanting each of these rooted shoots thus detached; and finally in hoeing and earthing up these new plants many times in such manner as to provoke at all the points brought into intimate contact with the earth the growth of numerous adventitious shoots, each of which bears an ear," says Le Correspondant, Paris.

"It is, in sum, a combination of 'slipping,' transplanting, and pruning. The system is, in truth, not new, but very ancient one, used immemorially by the Chinese, and to it is due the enormous yield of their fields, which have been treated like gardens.

"While our peasants throw broadcast handfuls of grain on the harrowed earth, offering rich pasturage to pillaging birds and rodents, the Chinaman, after furrowing the earth with his wooden plowshare, without turning it, crumbles each lump in his hands till it is like fine powder. This done, at planting time he walks slowly down each furrow carrying a grain-trill which is a marvel of ingenious simplicity.

"At the end of a few weeks germination begins. When the young plant is ten or twelve inches in height, there are a score of stalks about its stem each provided with a fringe of rootlets. The farmer covers each with loose earth by means of careful hoeing, thus raising the level of the furrow. Each stalk again proliferates, and there are soon fifteen to twenty new stalks around its stem, which detach themselves. All are the indirect issue of a single grain, which proves therefore to have been the parent of 300 to 400 stalks, each bearing an ear.

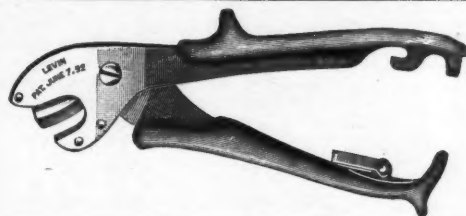
"Transferring this method to experimental fields and perfecting it, it has been found possible to separate from the stem each of the primitive stalklets with its own roots, transplant it, and then treat in the same way each of the new plants thus formed.

"Thus Philippe Miller planted a seed in the experimental gardens at Cambridge in June, 1776; in August, 1777, he obtained a harvest from this single seed 576,000 seeds. For unknown reasons the experiment was not repeated until June 12, 1903. On this date our own compatriot Bellefleur treated in this manner twenty grains of wheat planted in one square yard of carefully mellowed earth. On August 9 he separated and replanted the numerous stalklets springing from the earth. On October 8 of the same year, then on March 3 of the next year, and finally on May 13 he repeated the operation. On July 30, 1904, each of his twenty grains had produced 604 clumps bearing 28,388 ears, containing a total of 709,701 grains."

In buying apples at this time of year very few people seem to really know that the apples they get may not be at maturity for several weeks and possibly months after they are purchased, says Field and Farm. The fruit-stand men put on display the very showy apples which catch the eye of the passerby and create an appetite for something to eat, but usually he gets nothing better than Ben Davis or Wealthy. The following will give the consumer a pretty good idea of what to buy for the season of the year he desires to use them: The Grimes Golden, a yellow, Jonathan, brilliant red and yellow, are apples of high quality and are at their best from October to December. Wagener, red over yellow, Ortley, waxen yellow, Delicious, dark red and yellow, Stayman Winesap, dark red stripes, Rome Beauty, striped with red, are all dessert apples and are ready for use from December until late winter. Our main crop varieties like Gano, red, Ben Davis, red, Winesap, dark red, Lawyer, bright red, Arkansas Black, very dull red, Black Twig, dark red, Missouri Pippin, bright red, Pearmain, yellowish and Colorado Orange, yellow, are not ready for use until after January 1 and will supply the apple eating consumer until the new crop comes again next July. Our favorite apple at the present time is the old-fashioned Rambo which is grown to perfection here in Colorado. This apple is prime for eating or for cooking. The flesh is so tender that it melts down into splendid sauce. Every variety of apple has a season when it is at its best and uses to which it is especially adapted, and consumers should familiarize themselves with these things so as to enjoy them more.

Pruning Shears Given Away by Green's Nursery Co.

WE want orders sent in early by those buying vines, plants, or trees, for planting this spring. We therefore offer the famous **Levin Vine and Tree Pruner** as a gift to every person who sends in his or her order for nursery stock amounting to \$7.00 or over, as per coupon below. If your order is less than \$7.00 get your neighbor to join you in ordering trees, all to go in one package, and the **Levin Pruner** will be sent to you.

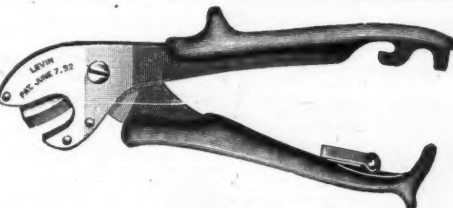


Gift of Green's Nursery Co., for early orders. You should order early for your own good. These shears given for early orders. You cannot prune right without them. Read about this gift of Green's Nursery Co. This gift may be worth \$5.00 to you.

This famous **Levin Pruner** is acknowledged to be the best made. Hardware dealers ask \$1 for it. No farmer or fruit grower should try to get along without pruning shears like that illustrated on this page. This pruner is made of the best steel. It is strong and durable. With it you can do twice the work you can with an ordinary pruning knife, and you can do the work with greater ease.

The **Levin Pruning Shears** are the best for pruning grape vines, raspberry, currant, gooseberry, blackberry and other shrubs and vines, also in cutting back the new shoots of pear and apple trees and for many other purposes on the fruit farm.

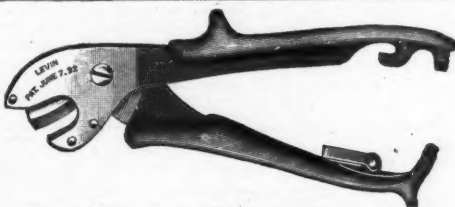
Gift of Green's Nursery Co., for early orders. You should order early for your own good. These shears given for early orders. You cannot prune right without them. Read about this gift of Green's Nursery Co. This gift may be worth \$5.00 to you.



Levin Pruner Used at Green's Fruit Farm for Many Years

We have never found anything better than these pruning shears. They can be easily taken apart and sharpened. We are able to send you this valuable premium free for the following reasons:

This gets your order to us before our big rush in April. This aids us by giving our office clerks steady work from January to April. It helps you to get more special attention in copying and filling your order and the trees shipped to you early in the spring, which is important.



Gift of Green's Nursery Co., for early orders. You should order early for your own good. These shears given for early orders. You cannot prune right without them. Read about this gift of Green's Nursery Co. This gift may be worth \$5.00 to you.

Conditions of Green's Offer to Give away these Pruning Shears

If your order amounts to \$7.00 or more, and if it reaches our office on or before March 15th, you will receive one **Levin Tree Pruner** free of charge, provided you ask for it at the time you order the trees, etc. These pruning shears will be sent carefully protected in the package with your trees.

Green's Nursery Co.

91 Wall Street,

Rochester, N. Y.

Cut out this coupon and send it with your order, then you will be sure to get the **Levin Pruner** gift.

GREEN'S NURSERY CO.,
Rochester, N. Y.

I enclose herewith my order which amounts to \$7.00 or more, at catalog price, and will ask you to send with my order your gift of the **LEVIN PRUNER**. I understand no premium will be allowed on order received after March 15th, 1914. I may add my neighbor's order to my own to make it amount to \$7.00, all to go in one package. Only one premium may be applied on any one order.

.....Name

.....City

.....State

BUSTED PRICES!

Our Great 1914

After!!

No Money Down

Here is the Greatest Sale ever advertised—the opportunity you have long sought for—a chance to buy staple lumber and building material—Roofing, Wire, Fencing, Furniture and Household Goods of every kind and description, in fact, Merchandise of every nature, at unheard of low prices.

We are determined that the Spring of 1914, will be the most successful in the history of this Great Company, and the Wise man will take early advantage of the great bargains shown in this advertisement.

You can order a complete carload of building material from us, including everything you need to construct and equip and we will ship it to you, without one cent cash in advance.

All we want to know is that the money will be paid us as soon as the material is received, unloaded and checked up.

Lumber Prices S-m-a-s-h-e-d

Yes, we mean smashed. Absolutely busted to pieces. That's our policy. We quote prices on lumber that will positively save you big money. If you will send your lumber bill we will send you a freight paid price that will mean a saving to you of from 30% to 50%. Every stick is absolutely first class, brand new and fully up-to-grade such as you would buy from any reputable house in the United States.

We have determined that the year of 1914 is going to be the Banner year in our great lumber department. We have on hand 20,000,000 feet of high-grade lumber suitable for the construction of Buildings, no matter for what purpose intended. Come to our great yards in Chicago and let us show you this stuff actually in stock. No other concern in the world has a more complete stock of everything needed to build, whether Lumber, Shingles, Structural Iron, Plumbing, Heating, Doors or anything else that you may need. Do you know the lumber is getting scarcer and scarcer every year? Yet our prices are lowest and will continue so until our stock is gone. WRITE TODAY.

Shingles At Big Saving

We have a special lot of 1,000,000 5 to 2 10 inch Clear Shingles on which we are making an exceptionally low price of \$2.50 per 100 sq. ft. in Chicago.

Order by Lot No. MB-40.

ROOFING PRICES SMASHED!

Galvanized Steel Roofing Is Fire, Water and Lightning Proof

We bought 20,000 squares of this Corrugated Iron Roofing, which we offer at this remarkably low price. It is new, perfect, and first-class, but light weight. The sheets are 22 x 24 in. x 1 1/4 in. corrugated. Our price of \$1.25 per sq. ft. o. b. cars Chicago.

When ordering this item, specify Lot No. CD-700. This is not galvanized, but black steel roofing. Write us today for our special **FREE PAID PRICES** on new, galvanized roofing. We are offering prices lower than ever before offered in the roofing business. Galvanized roofing at \$2.75 per square and up. Ask for free samples. We can furnish anything needed in Roofing, Siding or Ceiling.

62c Per 108 Square Feet Buys Best Rubber Surfaed "Ajax" Roofing

Here again we show the lowest price ever known for roofing of quality. This smooth surfaced roofing we are offering is our one-ply "Ajax" brand, and the price includes necessary cement and caulk to lay it; this price is f. o. b. Chicago; at 85c per square, we pay the freight in full to any point East of Kansas and Nebraska and North of the Ohio River, provided your order is for at least 3 squares. Prices to other points on application.

Roofing is guaranteed to wear as long and give as good service as any Ready Rubber Surfaed Roofing on the market. It is cut up in rolls of 108 square feet and contains 3 to 4 pieces to the roll. We have other grades of Ready Roofing, which we offer at prices easily 50 percent below regular quotations. Write today for free samples and Roofing Catalog. Fill in the coupon.

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Send me free of cost the following catalogues. (Place an X mark in square opposite the catalogue you wish.)

☐ Catalog of 50,000 Bargains ☐ Building Material
☐ Plan Book of Houses & Barns ☐ Roofing, Siding and Ceiling
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There is no change in our business, except that in the future the four Harris Brothers will advertise and sell their goods, heretofore advertised and sold under the name of the CHICAGO HOUSE WRECKING COMPANY, under the new name of HARRIS BROTHERS COMPANY.

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Consider what becomes of the stock of goods, when a manufacturer or big retail merchant goes bankrupt or "busted" as the saying goes. It is estimated that about ten thousand merchants annually meet with business disaster—this is why our company exists. If the stocks are sufficiently large and the goods are new and desirable, they find their natural way to our great forty acre plant for distribution at a small added profit, to our thousands of customers, who in this way get the benefit of wonderful bargains. In many cases our prices do not even represent the original cost of production. We stand foremost in our line. We recognize no competition. That's why we are called "THE GREAT PRICE WRECKERS."

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We guarantee absolute and complete satisfaction. There is no half way about this guarantee. Every purchase you make from us will be exactly as represented and you will be satisfied in every way, or we will make such just amends as are within our power. We will take back any unsatisfactory article at our freight expense both ways and refund your purchase price. We refer to our responsibility to the publisher of this or any other publication or any bank or express company and to the public at large.

We Sell Practically Everything

Our stock includes practically "everything under the sun." It's in truth, from a needle to a locomotive. No matter what your vocation, or what position in life you occupy, or what your business, or how great a merchant you are, you have use for us, and we have the goods that you can buy from us to a decided advantage. The quicker you learn to recognize this fact, the sooner you will be "putting money in your pocket."

Our stock includes Building Material, Lumber, Roofing, Sash, Doors, Millwork, Wire and Fencing, Hardware, Plumbing Material, Heating Apparatus and Supplies, Furniture, Household Goods, Rug, Stoves and everything needed to furnish or equip your home, your club or hotel. It includes Groceries, Clothing, Dry Goods, Boots and Shoes, Furnishing Goods and every single article to clothe a man, woman or child. It includes Sporting Goods, Fishing Tackle, Hunting Outfits, Tents, Guns, Harness and Vehicles, Jewelry, Sewing Machines, Clocks; also structural iron needed in construction of buildings, bridges, etc. Machinery, gasoline, gas and electric power plants. In fact you cannot think of a single manufactured article that we cannot supply you at a saving in price. Let us convince you—it means but little effort on your part to prove the truth of all we say. Write us today for our Catalogue and literature. Fill in the coupon shown below.

THE GREAT PRICE WRECKERS

LETTERS FROM CUSTOMERS

\$1,000.00 Saved
Everything arrived in good condition. I saved on the building; also heating plant and bathroom outfit about \$1000.00 as this kind of lumber would be very dear here.
(Signed) LEWIS YOUNG, Pennsylvania.

\$700.00 Saved
I am perfectly satisfied. Don't be backward in referring to me, for you have done more than you agreed to. I saved \$700.00 and also got better material, and a better house.
(Signed) JOHN J. DUNN, Ohio.

Satisfied With Furnace
The furnace I got from you is perfect in every way. I would not be without it one winter for double its price. If farmers only knew how easy it is to install it, they would not be without it.
(Signed) HENRY D. CHARTER, Canada.

Used 12 Years and in Good Condition
Some 10 or 12 years ago, I bought quite a bill of Black Corrugated Roofing from you, and only painted it twice since I laid it, and it is in just as good condition today, as the day it was laid. Please send me your catalog, as I expect to put up a barn next Spring and am looking for something for a roof as good as that bought from you last time.
(Signed) W. W. STODDARD, Ohio.

Will Order More
Am pleased to say the roofing all here and in splendid shape. Allow me to congratulate you on prompt delivery. You will receive more orders from me.
(Signed) D. DUCELLO.

Recommends Our Paint
I have used your Premier Paint in this salt atmosphere for the past four years and find it better for this climate than any paint I can buy, no matter what the price. (Signed) W. A. WEIDE, Florida.

\$13 BUYS COMPLETE BATHTUB

This is a white enameled, cast iron, one-piece, heavy roll rim bathtub; fitted with the latest style nickel-plated faucet and handles. Puller double bath cocks for hot and cold water, nickel-plated, connected with the ordinary 5 room house, with all necessary pipes and complete instructions for installing, for \$45.00.

Hot Water Heating Plants

We are headquarters for steam, hot water and warm air heating plants. They are suitable either for new or old homes. It is easy to install these plants in your old building. For this great Fall Sale of ours we are offering a warm air heating plant large enough for the ordinary 5 room house, with all necessary pipes and complete instructions for installing, for \$45.00.

Iron Pipe and Fittings

Good iron pipe in random lengths complete with couplings, suitable for gas, oil, water and sewerage of all kinds; size 2-8 to 12 inches; our price on 1-in. pipe, 11-4 inch at 4c per foot. Complete stock of valves and fittings. Send us your specifications.

AXMINSTER RUGS at 75c

We bought at New York high grade, brand new rugs and floor coverings. This is a sample of our money-saving bargains. Write for complete Free Rug Catalog, showing actual colors.

FURNITURE

We are the World's Bargain Headquarters for the outfitting of your home, club, hotel or hotel, from the very latest to the finest. An assortment of Household Goods and everything such as will be found in no other institution in the land. Write for free copy of our Furniture and Household Goods Catalog.

A THOUSAND PAGES OF BARGAINS

Write us today for a copy of our Great Big Spring Price Wrecker now off the press. It is the most stupendous Book of Bargains ever produced. It contains a thousand pages of matter true to life and describes the merchandise we are offering for sale so plain and correct that you will experience no trouble in making your selections.

It is a wonderful book of Bargains and can be used every day of your Buying Life. You need it whether you are a customer of ours or not. WRITE US TODAY.

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A beautiful up-to-date full 12 story, 7 rooms and bath, home. The biggest bargain in the world. Copied and imitated all over the U.S., but our price and quality cannot be equalled. The price is easily 25 to 50 per cent below local dealer's prices. Immediate shipment right from our Chicago stock, where you can see it loaded. NO MONEY DOWN. \$2.00 buys perfect Blue Print Plans, complete specifications and details. Send us \$1.00 and we will refund of \$1.00 if you do not like them.



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We are the originators of a system of selling practically complete Houses direct to the consumer, at a great saving. We eliminate all in-between profits. We sell and ship direct to you from our own stocks. Great care and study have been given all our Plans. Economy is the watch-word both in materials and construction.

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Our Binding Guarantee both as to quality and quantity goes with every sale. Write us for letters from people in your vicinity who have bought from us. We have thousands of unolicited testimonials.

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If you intend building, you will lose money if you don't write us at once. Tell us what you want. We will answer you promptly and give you valuable information regarding building. Send rough pencil sketch showing the kind of house you want. We will make you a freight paid price that will save you big money on material necessary to build same. Every stick first class. If you intend to make improvements, write us what they are, and we will help you to save money on your purchases.

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Our Book of Plans contains 120 pages of different kinds of buildings. Everything from a 2 room Portable House for \$147.50 to the finest kind of a residence. Houses are completely illustrated showing the floor plans, prices, etc. And it's free.

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Barb Wire Less Than 2c Per Rod

New Galvanized, heavy weight barbwire, put upon reels about 100 lbs. to the reel. Lot 2-CD-38 per 100 lbs. \$1.95. Galvanized barb wire, light weight, best grade, put upon reels about 100 lbs. to the reel. Lot 2-CD-38, per reel, \$1.40.



WIRE NAILS, Per Keg, \$1.28

5,000 kegs, put up 100 lbs. to the keg mixed, all kinds together, regular nails, such as made by nail factories. Lot 2-CD-38, price per keg, \$1.28. 1,000 kegs of 10 penny-weight regular new wire nails, 100 lbs. to the kegs with they last, per keg, \$1.35. Write for our free Wire and Fence Catalogue. Gives valuable information to any land owner. Fill in the coupon below.

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It is suitable for fences, stay wires, grape vines or for any ordinary purpose where wire is used. This galvanized wire is irregular in length—it ranges anywhere from 50 to 250 ft. \$1.13 is our price for No. 9 gauge. Other sizes in proportion.

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Our paint department is under the personal supervision of Mr. V. Michaelson, for 30 years the foremost paint man in America. His picture has appeared on over 8,000,000 cans, and his name is known from ocean to ocean. Paint of quality is his specialty. Every gallon has our strongest guarantee. Our Ready Mixed Barn Paint at 66c a gallon will outlast any similar paint produced. If you want quality paint, write us or write to Mr. Michaelson. If you prefer, fill in most valuable paint book ever published sent FREE. Send coupon.

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